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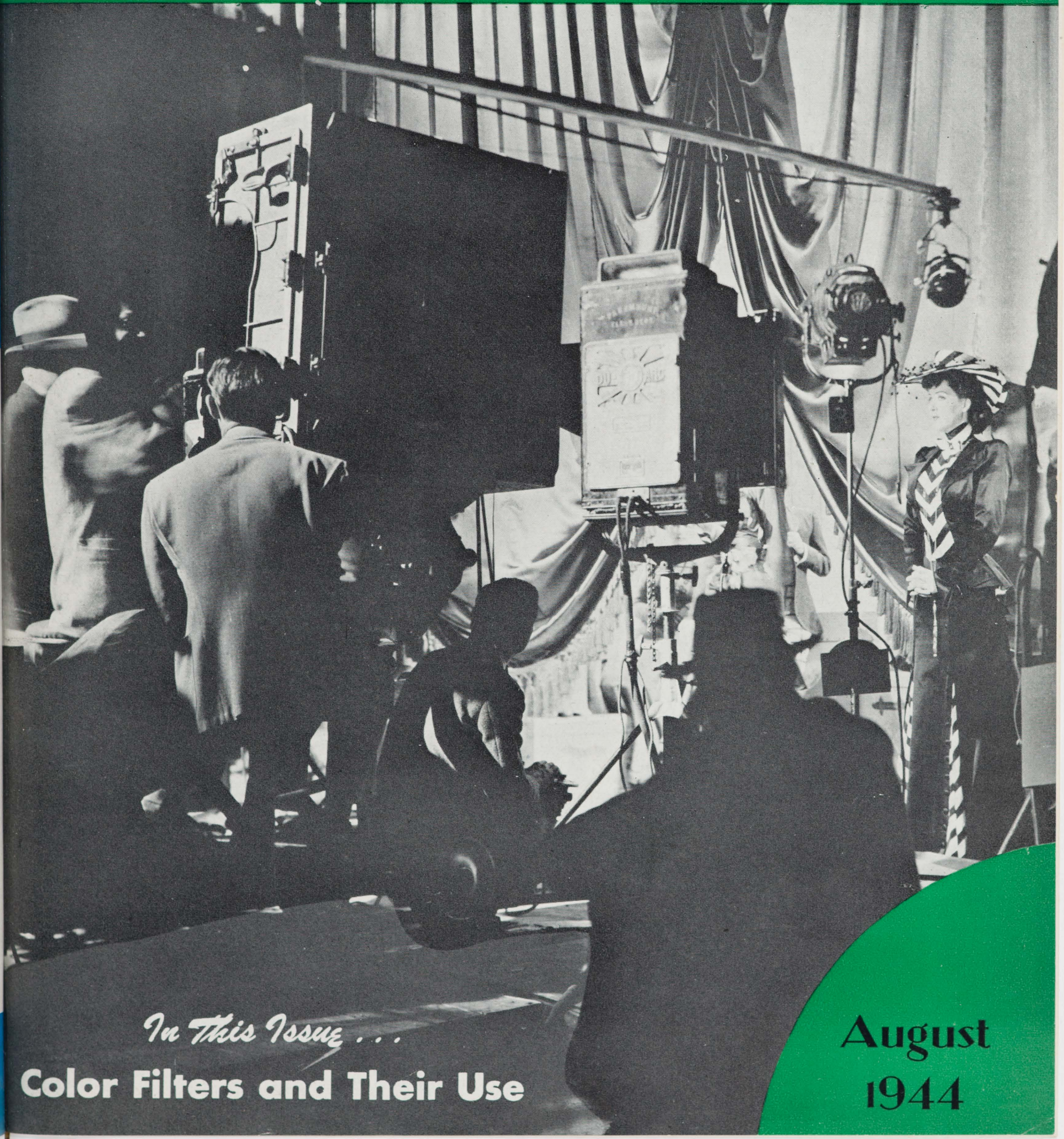
AMERICAN Cinematographer

☆ THE MOTION PICTURE CAMERA MAGAZINE ☆

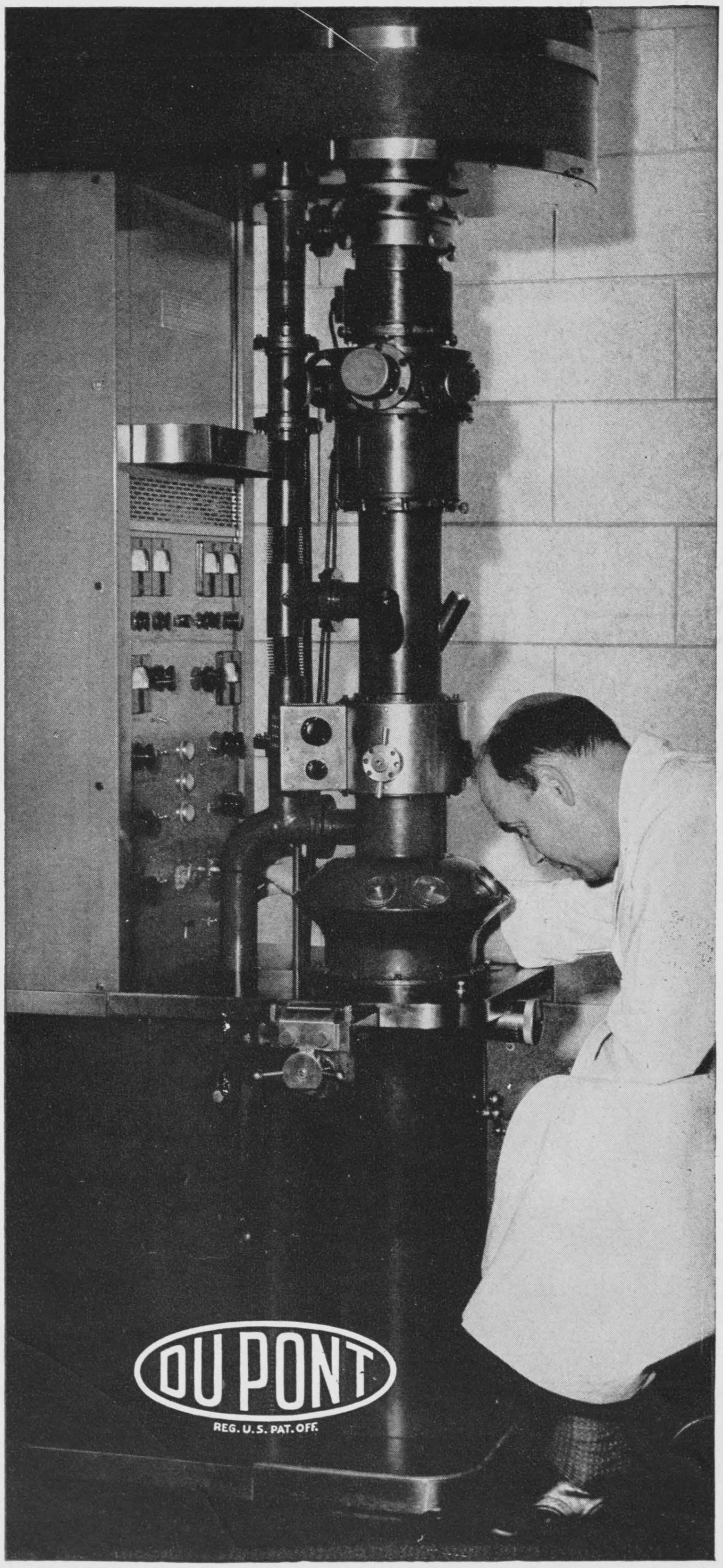


In This Issue . . .

Color Filters and Their Use

August
1944

Crystal gazing . . . FOR THE FUTURE OF FILM



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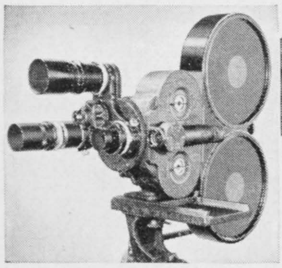

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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE **CAMERA** MAGAZINE

VOL. 25 AUGUST, 1944 NO. 8

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THE FRONT COVER SHOWS Director of Photography Ray Rennahan, A.S.C., lining up a shot during the filming of "Belle of the Yukon," which he photographed in Technicolor for International Pictures. Gypsy Rose Lee is the actress being lighted. She and Randolph Scott are starred in this lavish musical film.

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66

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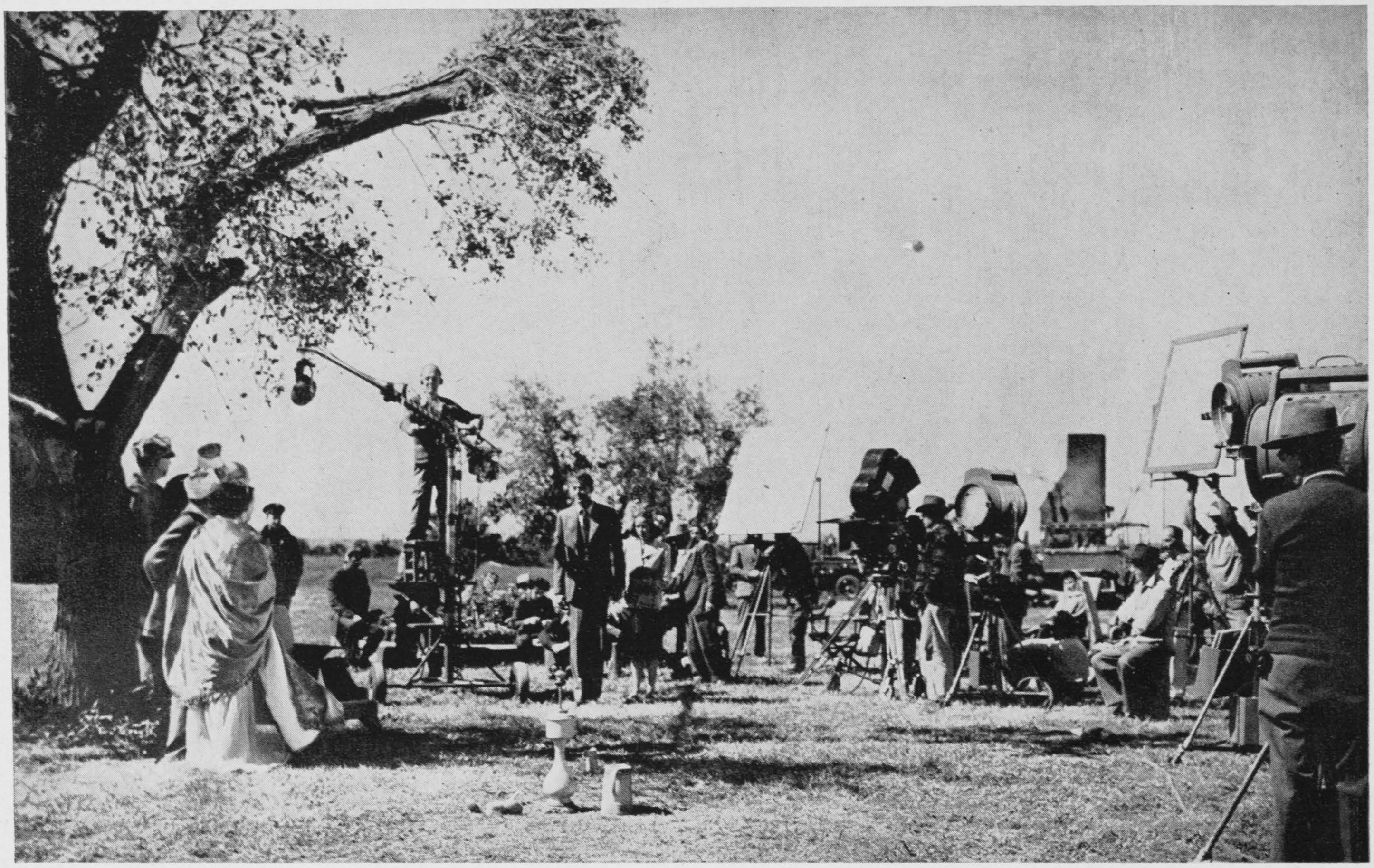
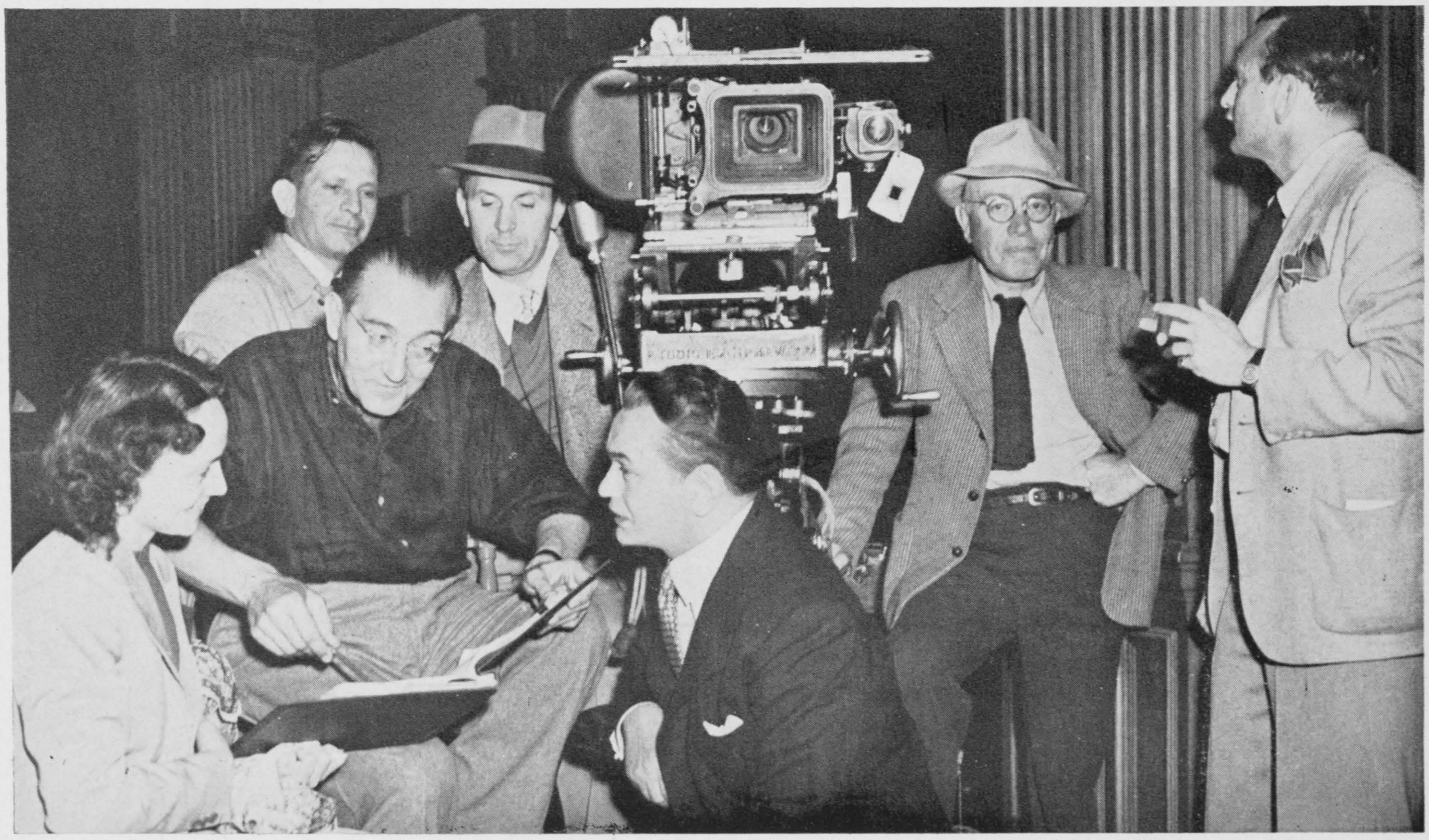


SHOOT COLORFUL SCENE! Ignited by a burning cigarette in the pocket of Gary Cooper, a Long Island mansion owned by his father-in-law burns down in a sequence of International Pictures' "CASANOVA BROWN." Gary Cooper, Teresa Wright, Patricia Collinge and others gather for the "post mortem" while cameras turn for the picture. Director of Photography is John Seitz, A.S.C.



PRELUDE TO MURDER. Director Fritz Lang outlines a scene involving the psychological development of a murderer to Edward G. Robinson, who co-stars with Joan Bennett in International Pictures' "THE WOMAN IN THE WINDOW," modern mystery thriller, as script girl, Nancy Lee, and cameraman, Milt Krasner, A.S C., look on interestedly.

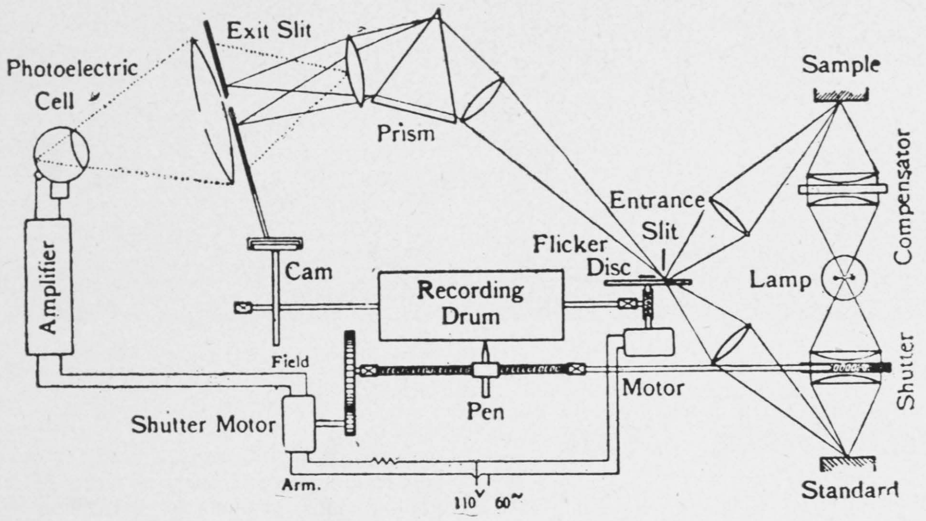


Fig. 1

Recent Advances In The Physics of Color

By H. V. WALTERS, B.Sc., A.R.C.S., D.I.C.

THE subject of color has many aspects, physical, physiological, psychological and aesthetic, and though we are restricted to the physical side in this paper, I hope I shall not give the impression that it can be kept hermetically sealed away from the others, or that it is the biggest and most important as far as future work is concerned.

The measurement and specification of color is properly a physical subject, and the main problems in color processes of cinematography and television are as yet physical or chemical, but if the physics of these processes is divorced from psychophysics and aesthetics, color in the cinema will have a very doubtful future.

MEASUREMENT AND SPECIFICATION

The International Standards for colour specification were laid down by the Commission Internationale de l'Eclairage (C.I.E.) some 12 years ago,[1] and though they cannot therefore be called recent, it is necessary to get a grasp of them in order to understand more recent work.

The following account is necessarily very sketchy and far from rigorous, but it should give a picture of the main points in the C.I.E. resolutions.

For a given observer under definite conditions of viewing, a patch of colour C can be matched by a suitable additive mixture of three other colours, say a red, green and blue, and we can represent the colour match by

$$C = rR + gG + bB \quad \ldots\ldots\ldots\ldots (1)$$

where R, G and B are unit amounts of red, green and blue. In the C.I.E. system the arbitrary choice is made that there should be equal numbers of units of the three primaries used to match a particular source of white light. Equation (1) is generally true, and one might equally well match R, G, and B in turn with another set of primaries X, Y, Z.

$$R = p_{11}X + p_{12}Y + p_{13}Z \quad \ldots\ldots (2)$$
$$G = p_{21}X + p_{22}Y + p_{23}Z \quad \ldots\ldots (3)$$
$$B = p_{31}X + p_{32}Y + p_{33}Z \quad \ldots\ldots (4)$$

These equations are in algebraic form, but it should be borne in mind that the sign of equality means "is a colour match with" and not as in "sixpence equals half of a shilling."

CHOICE OF PRIMARIES

One could have matched C of course with X, Y *and* Z,

$$C = xX + yY + zZ \quad \ldots\ldots\ldots\ldots (5)$$

and if this is done, the values of x, y and z are found to be the same as those one would get from combining the first four equations algebraically, *i.e.*,

$$x = rp_{11} + gp_{21} + bp_{31} \quad \ldots\ldots\ldots (6)$$

and similar equations for y and z.

From this result it is clearly a matter of convenience which set of primary colors, X, Y and Z are chosen and there is no physical limitation upon them. The set chosen by the C.I.E., possess two notable advantages. The first is that for all physically realisable colors, x, y, and z are positive or zero. The second is that the luminosities of X and Z are both zero, so that transmission or reflection factors can be found simply from y. Both these properties are unobtainable with physically realisable primaries, so there is the concomitant disadvantage that it is not possible to do colorimetry in the C.I.E. system directly, but only by means of algebraic transformations or rather lengthy computation from spectrophotometric data.

One might have anticipated that in the period since 1931 there would have been dissatisfaction at the fact that the International Standards, which are necessarily highly permanent, should be tied to the experimental results of that time, and also that they were crystallized in the particular form then thought best. Criticism of the experimental results has not in fact been forthcoming to any significant extent, a tribute to the original work and to the standardizing committee. The form of the resolutions has been more of a bone of contention and I shall return to that shortly.

OBJECTIVE MEASUREMENT

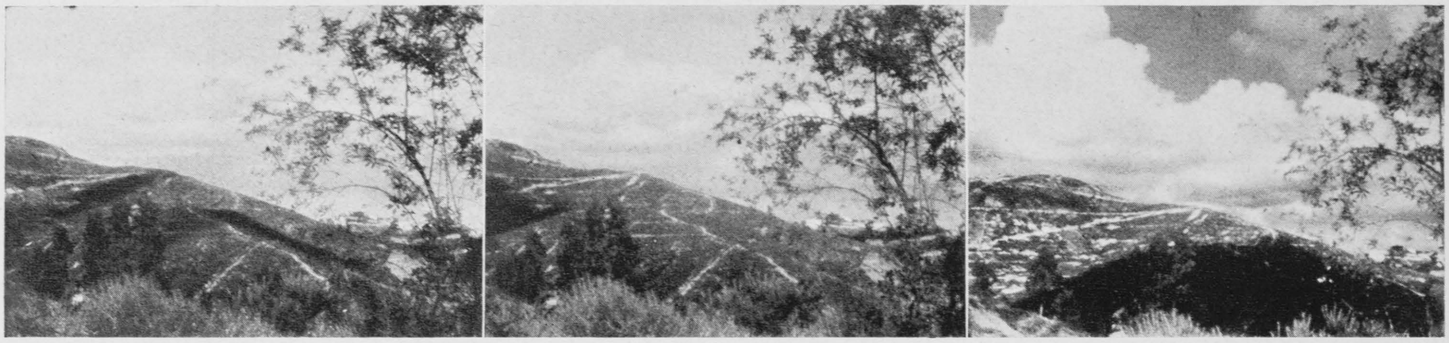
The C.I.E. resolutions postulate an "average observer" but no individual has been found with standard characteristics in all respects. The correction of the results of visual colorimetric observations to standard ones is difficult and tedious, and for accurate work it is better and simpler to compute the color specification from the spectral characteristics of the sample and illuminant, using the tables for the spectral color matching properties of the C.I.E. standard observer.[2]

It is a matter for regret that we in this country (England) have concentrated on colorimetry to the detriment of the development of spectrophotometry. Visual colorimetry is an extremely useful tool, but personal variations and limited sensitivity make it rough. This is not academic for the film industry, since personal variations can give rise to heated arguments in a color control laboratory.

In Fig. 1 is illustrated an apparatus for recording spectrophotometric curves which has not yet appeared on this side of the Atlantic.[3] Light from a common source falls on the sample under test and on a standard reflecting block, say a thick layer of magnesium oxide. By means of a rotating sector (flicker disc) the light is reflected from each in turn on to the entrance slit of a monochromator, and the spectrally selected light emerging from the exit slit falls on a vacuum photo-cell. The A.C. component of current due to the cyclic variation of light intensity is amplified and used to drive a motor, which in turn operates a shutter or polarising device in one of the beams in such a way as to bring about balance. A cam moves the exit slit through the spectrum, and this movement is synchronized with the rotation of the drum carrying the recording paper. A train of integrating machines may be attached to calculate the C.I.E. specification and according to the complexity of the curve the complete record is taken in from 15 seconds to a minute.

The performance of the instrument is well illustrated by some measurements on white papers made with the Hardy recording spectrophotometer. Of a num-

(Continued on Page 278)



Above, three frame enlargements from 16mm. film. Left, no filter was used. Center, same scene with K-2 filter. Right, same scene with 29-F filter.

Color Filters and Their Use

We have received so many requests for information concerning color filters and their use that we herewith present the following data on color filters from the American Cinematographer Hand Book and Reference Guide. This book, written and compiled by Jackson J. Rose, A.S.C., contains more than 200 pages of practical information on all photographic problems. From time to time we will present various charts, tables and other data contained in this book.—The Editor.

K 1—Slight color correction for all regular orthochromatic films; of little value to any of the new type panchromatic films.

K 2—Medium color correction for all regular orthochromatic films; of little value to any of the new type panchromatic films.

K 3—Full color correction for all regular orthochromatic films; darkens blue sky and water; brings out white clouds; has slight color correction value on panchromatic films.

AERO 1—Slight color correction for all types of panchromatic films; produces slight contrast; penetrates slight haze; helps to snap up faces with very little added exposure.

AERO 2—Normal color correction for all types of panchromatic films; produces medium contrast; darkens blue sky a few shades; brings out clouds; greater haze penetration than Aero 1; most popular filter used for general exterior photography, particularly when more contrast is desired on cloudy days.

15 G—Full color correction for all types of panchromatic films; produces more contrast than Aero 2 and is used more for open landscape; darkens sky, bringing out clouds; strengthens relief of foreground; lightens all yellows, orange, red and slightly lightens green and magenta colors.

21—Slight over-correction for all types of panchromatic films; produces more contrast than the G filter; full and strong cloud effects; lightens normal panchromatic make-up slightly; good for mountain and aerial work; penetrates distant haze; good for use with long focus lenses.

23 A—Medium over-correction for all types of panchromatic films; darkens blue sky and water for light night effects in sunlight; lightens normal panchromatic make-up; produces more contrast than 21; darkens greens slightly; lightens all yellow, orange, red and magenta colors.

25 A—Great over-correction; action is the same as 23 A but more pronounced; produces very strong contrast; penetrates aerial haze; creates dramatic and spectacular night effects; used with infra-red films also for three-color separation negatives as tri-color red.

29 F—Extreme over-correction and extreme contrast; full night effects in strong sunlight; turns blue sky and water to strong black; necessitates special make-up, otherwise face will photograph white and chalky; also used with infra-red films; turns all yellow, orange, red and magenta as white.

70—Extreme over-correction and extreme contrast in all blue and green colors; used generally for haze cutting in aerial work and heavy night effects in strong sunlight; also used with infra-red film.

72—Extreme over-correction and extreme contrast in all blue values; turns blue sky and water to jet black; can be used for long distance haze cutting in aerial work; for extreme night effects in strong sunlight with lens wide open only; also used with all types of infra-red film; cannot be used with the slower type of panchromatic films.

88A—Cuts out all visible colors but transmits infra-red rays; can only be used with infra-red film requiring the strongest of sunlight; cannot be used with any other type of film.

47-C5—Generally used with orthochromatic films to increase the blue contrast; makes blue sky lighter; makes any emulsion color-blind; also used for three-color separation negatives as Tri-color Blue.

49-C4—Used principally as a viewing filter for arc and daylight illumination; increases blue contrast when used with orthochromatic films; also used for color separation from transparencies; of no photographic value to panchromatic films.

X 1—Has slight softening effect on all panchromatic films; can also be used with orthochromatic films; renders all greens and yellows in slightly lighter shade and all reds and blues in slightly darker shade; gives full correction for Super Pan in daylight.

X 2—Has medium softening effect on all Pan films; same action but stronger green contrast than X 1; gives full correction with Super Pan in Mazda light; darkens reds slightly; also used for snow scenes where deep shadows predominate.

56 B—Strong softening effect on all types of Pan films; produces great green and yellow contrast; same action as X 1 and X 2 but with considerably stronger effect; in combination with 23 A is used for softer night effects without excessive contrast.

58 B—Slightly stronger than 56 B; used for the same purpose but for more contrast; picks up green as white, other colors as dark; also used for color separation negatives as Tri-color Green.

3 N 5—Combination of Aero 1 and 50% Neutral Density filter; light color correction without contrast; softens slight glare and generally used for open landscape, street scenes, desert and snow scenes.

5 N 5 — Combination of Aero 2 and 50% Neutral Density filter; medium color correction without excessive contrast; softens strong glare and contrast; same action as 3 N 5 but with added detail; used for snow scenes and strong contrast with heavy shadows; gives pleasing values when used on open water scenes.

25% ND—Light contrast neutralizer; softens light glare and contrast; light exposure compensator.

50% ND—Medium contrast neutralizer; medium softening of glare and contrast; medium exposure compensator; may be used with all types of film and in combination with any filter.

75% ND—Strong contrast neutralizer; same action as 50% ND but with greater degree of soften effect.

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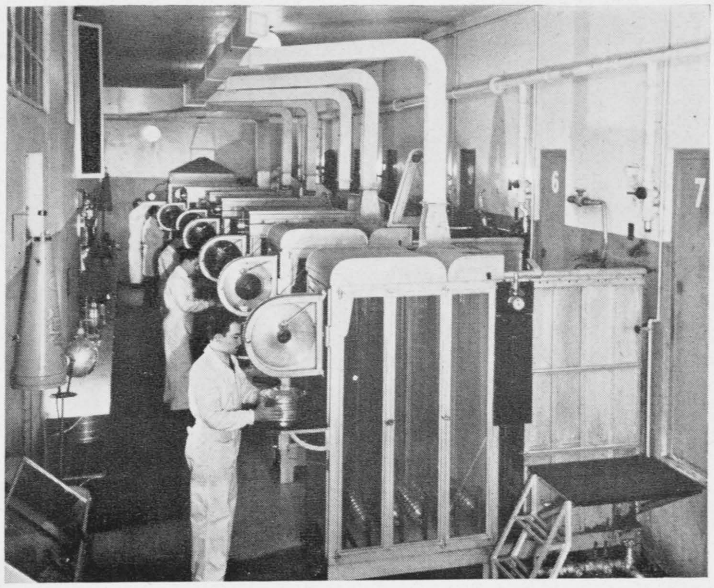


Film Production In Argentina

By WILLIAM BURTON LARSEN

ARGENTINE feature films are winning larger audiences in Latin American theatres each day, due to improved quality of direction, acting, photography and, largely, because of the high quality of laboratory work which is now available.

The film industry in the Argentine, like that in the United States, has experienced its "growing pains". In its early years small companies were formed, "just to make money", and the films were mediocre because the small company organizers closed their eyes to the need of good technicians. The laboratory work was done largely by amateurs. Thus, the resulting films that reached the screen were far from desirable.

In 1927 an Argentine banker, whose hobby was developing movie films, changed the entire complexion of the Argentine film industry when he decided to give up the banking business and go into the laboratory business. He was Alex Connio, now deceased. With his son, Carlos, he established the first film laboratory in Argentina dedicated exclusively to the processing of motion picture film.

The first years were not easy. All the machinery used in the laboratory was designed and made by Alex, with the assistance of his son and a few enthusiastic young friends who looked to the new laboratory for a career. Among those boys was young Tonino Bava, who today is manager and partner in the Alex Laboratories. Carlos Connio, who had long experimented with his father, soon became a guiding hand in training new laboratory technicians to handle the increased volume of business that began to pour into the new plant.

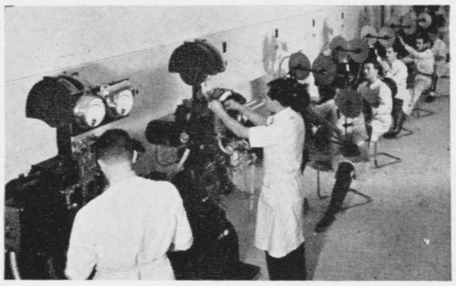
During the early days of the laboratory the "Rack and Tank" system of negative developing was used. In 1933 Alex designed and built their first developing machine which started operation in 1934. Soon three other machines were constructed, and thus began the modernization of motion picture film processing in Argentina.

In 1936 Carlos visited the United States to study the film laboratories of New York and Hollywood. He returned to Buenos Aires and reorganized the laboratories. New machinery was installed, and the laboratories soon were able to handle large scale daily production demands. The first feature film to come out of the newly transformed laboratories was "Asi Es El Tango". The second was "Papa Chirola". The quality of negative developing and prints that came out of the new laboratories played a large part in spurring film production in Argentina, for when film producers found they could have modern, dependable laboratory work they plunged into the making of features. In 1937 Alex Connio died; just ten years after founding his laboratory, but he died happy in the knowledge he had played a large part in stimulating the film industry in his native country. His son Carlos took over the direction of the company. Today it is in these laboratories that most of the processing of Argentine films and newsreels is done, as well as making copies of the majority of American feature films, of which duplicate negatives are sent from Hollywood and New York.

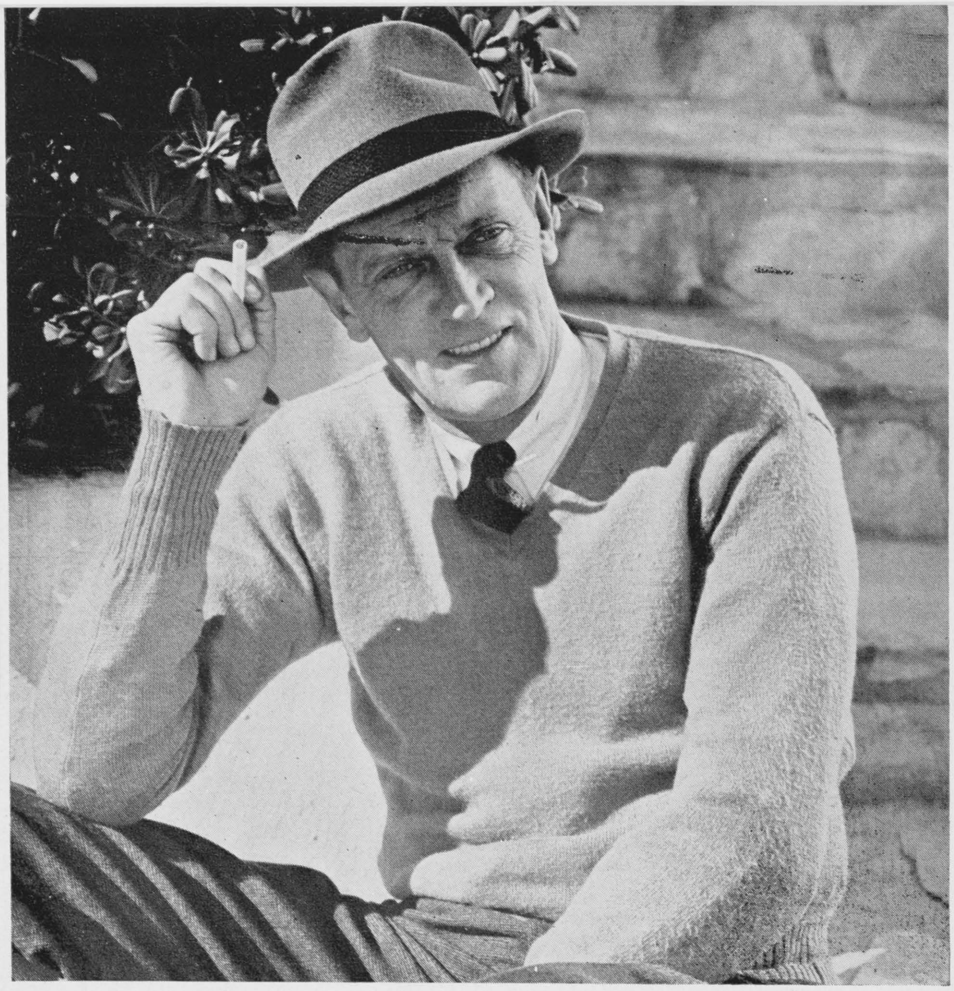
In 1934 the laboratories had one automatic developing machine. Today there are ten machines working 24 hours each day. There are 12 modern automatic printing machines running day and

(Continued on Page 282)

NOTE: Mr. Larsen is the newsreel cameraman for RKO Pathe News, stationed in Argentina. At present he is also the "pool" cameraman for the five American Newsreels in Argentina. He has spent the past ten years in Latin America making newsreels and shorts. During that time he has made pictures in Brazil, Peru, Bolivia, Ecuador, Chile, Argentina, Uruguay, Paraguay, Mexico, Guatemala, Panama, Costa Rica and Cuba. —The Editor.



Upper left is William Burton Larsen. Top right, developing room in Alex Laboratories. Center, printing room. Bottom, Carlos Connio, director and owner of the Laboratories.



Aces of the Camera

James S. Brown, Jr., A.S.C.

By W. G. C. BOSCO

A CERTAIN popular brand of cigarette has, the manufacturer claims, so much allure that the least energetic person is actually anxious to walk a mile to get one. Even in normal times, when you could get all the gas you wanted and didn't have to do any more walking than was strictly necessary. This claim has been made for years, in good weather and bad, and has been substantiated by a vast number of advertisements which continue to labor the point.

Perhaps the willingness of even a portion of this nation of congenital car riders to walk more than a block for anything amazes even the manufacturer. But, at any rate, each of these advertisements features the photograph of a famous somebody holding one of these cigarettes, unlit, and enthusiastically endorsing the allure angle of the smoke while going on record with an expressed willingness to walk a mile to get one.

People representing every shade of opinion have been featured in these ads, but they all agree with each other on this one point with monotonous regularity. Perhaps it is a portent, in a world of disunity and disagreement, to find such solid unanimity among so many important people. Because the people featured in these ads are important people, with big names. People who have arrived. The debs, not the dubs.

Yet, with all that, being a pipe smoker and a reluctant walker at best, we were inclined to skepticism. Did these people really say these things the advertisements claimed they did? Did these people even exist? Or were they just a figment of the copywriter's imagination? Frankly, we were worried. We wanted to believe. Human integrity seemed to be at stake. But there was always that doubt. Until one day we saw smiling wanly up at us, in color, from the back cover of *Life* Magazine, the face of camera ace Jimmy Brown, A.S.C. There he was, with the same unlit cigarette in his hand, saying almost word for word what all the other famous people had said about this smoke before him.

The opportunity was too great to miss. Once and for all we would settle this perplexing question and pass on the information to our grateful readers. Even though it was an old copy of the magazine we were reading in a dentist's office, and there was the chance that Jim had changed his brand in the meantime, we hastened to interview him. Forgetting, in our search for truth, the dental appointment for which he had waited six months.

We found Jim Brown in his home studio at Larry Darmour's shooting interiors on a picture for Columbia release. He had just returned from an arduous location trip and when, during a break in the proceedings, he stopped to talk he pulled out a package of cigarettes, and we noticed with satisfaction that it was the same brand. He offered us one, but having quite a bit of walking to do as it is, we lit a pipe.

Jim answered our questions with refreshing candor. There was no hedging. Yes, he smoked the cigarettes, as I could see. Yes, he admitted saying what the ad quoted him as saying, although not in precisely the same words. It was only when the question of walking was raised that Jim lowered his eyes from mine and tried to change the subject to filters. But we insisted. So Jim ups and admits that he had never walked more than a block and a half for anything; that he had never had to walk a mile for his favorite cigarette because he could always get them at the corner drugstore. But, he insisted, he did find them a darn good smoke, and very refreshing.

Now as anybody can tell you, Hollywood is a very small town. So it was inevitable that the news should be bruited around quite quickly that Jim Brown, A.S.C., got a lift from a certain brand of cigarettes. And it was inevitable that more and more cameramen, who also needed lifts, switched brands. It was even noticed that some cameramen who were not smokers carried this brand of cigarettes in their pockets for their friends; in grateful appreciation to the tobacco company for having included a cameraman in their Hall of Fame. They appreciated this recognition to their profession, a recognition so frequently withheld by reviewers and critics. As a result many of the A.S.C. members now smoke the same refreshing cigarette. And if a plug like that isn't worth an ad in this magazine we don't know what is. (Advertising manager please note.)

The profession of motion picture cameraman was accounted glamorous and exciting in the days before mountains were built in sound stages and rear projection brought the great outdoors into the studio. It was an adventurous life for a cameraman when film fare was flavored by stars who jumped from car to train, and a broken rib could be anticipated with more certainty than a paycheck. The action picture made Hollywood famous, and its devotees, who

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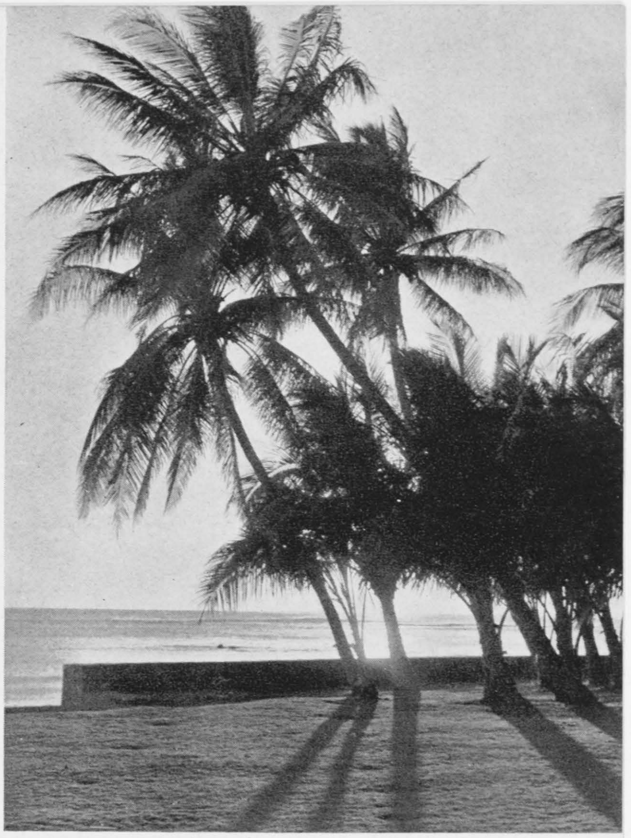
Tropical Problems in Aerial Camera Maintenance

By R. H. BAILEY



The tropical scenery above is beautiful, but the humidity that fills the air in those locations makes camera care a headache for cameramen of the Armed Services.

RUST, corrosion and fungus, resulting from the hot, wet climate of the tropics, have been bugaboos to the cameramen of the Armed Services since the opening days of the war. Bad as the conditions are on the ground, the aerial cameras take a greater beating because of the wide range of altitudes and temperatures under which they are used.

The Fairchild Camera & Instrument Corporation, manufacturers of the bulk of aerial cameras used by the U. S. Army and Navy, has been trying to solve the tropical problems for the aerial cameras ever since the war began, and as the result of long research into tropical fungus and moisture conditions, is now providing corrosion and rust preventative finishes on nearly all metal parts of these instruments.

The aerial cameras, as a general rule, are large, heavy machines weighing in the neighborhood of 60 to 70 pounds. They are constructed mainly of aluminum and magnesium, with the small, critical inside mechanism parts composed of steel. The cameras are electrically operated so they wind and trip automatically, and are constructed to hold large rolls of film, sufficient for several hundred exposures. Lenses are large and heavy, and in many cases are cemented together with balsam or methocrylate cement. In certain models there are electrical heating elments incorporated, consisting of extremely fine resistant wires which carry the electric current to heat the equipment at high altitudes and low temperatures. Electrically-heated cameras have insulated linings of cork and tinfoil to help retain the heat. A photo cell unit is used with one model to control the shutter trip action. And each camera is shipped in its own leather and steel trunk, so you see that they are a far cry from the little black dollar box cameras.

The consistently high humidity and heat of the tropics causes the surfaces of the aluminum and magnesium castings, when not protected by anodizing or special paint, to corrode readily, unless the surfaces are cleaned often. This corrosion takes the form of a greenish residue which gradually pits the surface of the metal.

The moisture-laden air also causes steel parts in the cameras' shutters and drive mechanisms to rust easily unless they are oiled and greased frequently. These steel parts are usually of a critical nature and are specially heat-treated in order to withstand the shock to which they are subjected during the normal operation of the camera.

Because some of the units, notably the shutter and magazine drive mechanisms, are covered and are fairly airtight, condensation forms on the inside of the housing when the cameras are taken to high altitudes, thus causing the steel inside parts to rust.

If cameras are left on the ground for a period, the humid, warm air gradually seeps into the shutter and drive housings, and is carried aloft with the camera on high altitude missions. At these high altitudes the air is very cold, and much drier than on the ground. This causes condensation when the cold air comes in contact with the warm, moist air in the units, and moisture forms on the steel inside parts. The rust caused by this condensation usually goes undetected until a breakdown occurs, as, ordinarily, the housing covers could not be removed.

The Fairchild company found that some of its earlier model trunks and carrying cases, which were lined with felt pads fastened to the frame of the trunk with animal glue, caused a great deal of corrosion on the cameras because the felt retained the moisture and held it in contact with the aluminum and magnesium baseplates of the cameras.

Cameras left in planes overnight in the south Pacific islands would invariably be drenched with moisture the next morning and would have to be thoroughly dried off before being used. Moisture would seep between the lens elements and form in pools. And electrical heater wires rusted very badly, causing them to break easily.

Another problem which proved troublesome was the formation of fungus on the lining and fabricoid covering of the camera trunks, between the glasses of the lenses, and on the cork insulating lining of certain camera models. Due to the extreme heat and moisture conditions in the tropics, fungus grew in abundance, and very heavy and vari-colored growths formed on the felt and cloth linings of the trunks and carrying cases, attracted by the glue used to hold the felt to the trunks. Fungus also grew readily on the cork linings of other Army and Navy equipment, and, gen-

It was noted that certain types of glue seem to attract mites, which transport the fungus spores.

Fungus on the lenses was the cause for much study. Actual etchings in the glass resulted from the secretions of the mites which found their way between the lens elements. If the lenses were not cleaned often, this etched condition could not be removed. Lenses should be cleaned with blasts of compressed air; air is not always available, so lens tis- erally speaking, instruments of construction similar to cameras were attacked in much the same way. sues, or soft, lintless cloths can be used. Water should never be used.

In order to keep the cameras in the field in a going condition at the outset of the war, the Fairchild company set-up a comprehensive service department, with camera technicians stationed in every battle area and with every photo reconnaissance squadron, instructing the photographers in methods of combating moisture and fungus. In addition, the servicemen hunted down all cameras with cork linings and yanked out the insulation.

From their work, the servicemen formulated remedies. One of the best solutions to the moisture problem was found to be the hot room or hot locker for storing the equipment. All through the tropical areas of the world the servicemen have constructed small buildings of light board, and installed rows of electric light bulbs, or some type of electric heaters, in the rooms. The rooms are

(Continued on Page 282)

War Cinematography In Russia

By ALEXANDER NOVOGRUDSKY

MOSCOW JOURNALIST AND FILM CRITIC

DRIFTING by the windows of our train were terraced foothills, mountains, with bits of lowlands here and there to taunt us with an occasional glimpse of the horizon beyond. My companion was young Ukranian Igor Savchenko, producer of the film hit "Bogdan Khmelnitsky," who kept his eyes glued to the passing landscape. He was seeking film locations that would look like his native Ukraine.

You might ask why he didn't go to the Ukraine to film his picture. Well, he couldn't very well, for this was the first year of the war, and the Germans had overrun the Ukraine. Film studios of the Ukraine had been removed far to the east. The Kieve studios had been moved to Ashkabad, the capital of Turkmenia. One might well have thought the film producers of the Ukraine Republic would have been forced to stop film production. But they could not be stopped. And here, on a train passing over the Alatau Mountains heading for Siberia, was this film producer hunting for locations to film a story about the activities of the Ukrainian Partisans. Igor, like all the other people in the Soviet film industry, was vehemently devoted to his work, and nothing but death could stop him.

Igor firmly believed the Germans would eventually be driven out of the Ukraine, and he wanted to have his film ready to show the people when the Germans were defeated—but he wanted it to look authentic. Even the war could not make him create a picture that he would be ashamed of.

Watching Igor, I was reminded of the previous winter of 1941 in Moscow. The city then seemed deserted and colder than usual. The outskirts were lined with anti-tank pits and barriers. White army trucks had hurried down the highways to the west. The Germans had been repulsed, but the battle front was still near.

There was one spot in Moscow that teemed with activity. So many people rushed in and out of a white house on Gorky street that one might have believed it was army staff headquarters. In reality it housed a quite different staff. This building belonged to the Cinema Industry. As they returned from the front, journalists, scenario writers and cameramen came here. In offices on the second floor, the only place that was warm, fresh subjects for films were discussed, new ideas and fresh news from the front were exchanged—all this with the enemy knocking at the city's gates.

These men didn't always find time to elaborate the treatment of their film ideas, but these ideas, acquired in battle, were sent to remote places in the east where temporary studios had been erected. Oftimes story conferences were interrupted at night by the sirens, and the film men would dash to the rooftops and watch the searchlights sweep the sky to ferret out German planes that had broken through. Art and war were indivisible. The cinema refused to fall silent beneath the thunder of war. In her own manner the Cinema participated in the war. During lulls in the fighting our soldiers drew fresh strength from seeing films.

All of Russia maintained tremendous interest in the cinema, even during the darkest days of the fighting. It was this interest that caused my newspaper to send me throughout Central Asia to report on the activities of the studios that had been removed beyond the danger of the invaders.

At the city of Almaata I detrained and soon was standing in a temporary studio that housed the cinema industry of both Moscow and Leningrad. The structure was formerly a club, and was not designed to house a cinema studio. Thanks to the aid of the government of the Kazakh Republic, stages, cutting rooms and other quarters had been set up with remarkable speed.

The place was a behive of industry. Everywhere sets were being built. But there were many handicaps. Lack of lumber, for example, made it necessary to use woven reeds for walls. It is amazing how necessity makes one realize that there are substitutes for practically every material thing.

When I was at the studio the film program was made up of numerous short films, which included drama, satirical sketches, and stories with war themes.

First to greet me at the studio were Ivanov and Stolper who were then completing the editing of "Chap From Our Town." Pudovkin was preparing to film "In Name Our Country." Eisenstein was preparing to start a picture about Ivan the Terrible. Eisenstein's office looked like a museum, with ancient weapons, decayed folios and 16th Century costumes everywhere.

Kazakhstan, Tadjikistan, Uzbekistan and Turkmenia have all acquired new cinema industries since the war. When I arrived in Tashkent I found Sergei Gerasimov working under a broiling sun shooting "Unconquerables," a picture about the defense of Leningrad. In Ashkhabad Mark Donsky was filming "How Steel Was Tempered." In Stalingrad Yutkevich was making a comedy.

I found Alexandrov a new film in Baku, and in Tbilisi the Georgian film specialist, Mikhail Chiaureil, was producing "Georgi Saakkadze," a story about the past Georgian glories—this during the days when the front lines were creeping nearer and nearer Valdikavkas.

Thinking today of those troublous times, I marvel at the courage and bravery of those soldiers who finally have driven the enemy out of those Ukrainian cities where the cinemas and theatres are again open to the public. Two splendid film bases have been established at Odessa and Yalta. The Lieve studios have resumed production. Studios in Leningrad and Moscow again house their returned cinema workers. A new studio has been built in Sverdlovsk, and other studios in the remote east continue to produce new films.

At an art evening at Moscow House one may meet eminent representatives of Soviet Cinematography, although many are on locations in distant parts of the country, and a large number are at the front filming the fighting.

Vesvold Pudovkin has left to make a historic film about the famous Russian Admiral Nakhimov. Mark Donskoy is now filming "Unsubdued." Alexandrov has started a new comedy. Ermler is working on a picture about an army leader. Vladimir Petrov is preparing, as is Mikhail Romm.

A few days ago I met my old traveling companion, Igor Savchenko. He is now completing a color film, "Russian Sailor."

Thus the film industry goes on with the war; the war which we know will be won by the Allies. But we know that severe battles lie ahead, and that before rejoicing over victory, victory must be won. The price of victory is high in blood and toil. But we also know that the dark forces of Fascism are doomed, and that liberty-loving nations will soon breathe freely again. They will soon be rid of the Nazi monster. We know that this monster, sorely wounded on the fields of Russia, will be finished off in his own lair by the combined forces of the great Allied Nations.

An American who arrived here told me, "I am not surprised at the fact that you Russians are great dreamers. What surprises me is that your incredible dreams come true."

As a matter of fact, there is nothing remarkable about this. It is necessary not only to dream, but also to starve for the realization of one's dreams. It is necessary not only to talk, but to act and work and struggle.

It is upon this principle that our progress is based, and this applies to Soviet Cinematography, which well deserves to be termed "War Cinematography."

Kodachrome and Exposure Meters

By ALVIN WYCKOFF, D.Sc., A.S.C.

WITH a war going on and the manufacturer called upon to increase deliveries of Kodachrome to every fighting front, as well as to all the technical photographic departments back of the many battle fronts, Kodachrome for civilian purposes is becoming increasingly more difficult to purchase. As of today, almost the entire output of Kodachrome is delivered to the war agencies. Being so precious and hard to get, we shouldn't take chances on risk exposures. We must hit the bull's eye with every shot.

So the question is asked: "Does the operator or the meter make the correct exposure?" Obviously, the question is without sense, since the meter is an instrument without a thinking-mind but fashioned from out of the mind, unable to think for itself, operated by either an unthinking careless operator or by an operator with an analytical mind. Accordingly, results are bad or good.

Meters are of two kinds; good ones and bad ones. They are created for light-measurement or to determine light density. And like all scientific instruments, the purpose of their use, and their functioning ability had to be "though out" according to certain formulas.

Let us decide then that exposure is determined by the operator with the aid of a meter, regardless of its make or kind. The determining factor then for the right exposure is the result of the "thought" that has been generated in the mind of the operator, in conjunction with the reading he obtained. Through the manner in which he used the meter to measure the light density of the illumination that fell upon, or was reflected from, the subject to be photographically reproduced will come correct or incorrect exposure.

In proportion to the analytical thought-force the operator has put into his problem will depend the perfection-quality of his reproduction. And, there are two kinds of operators; those who are careless, and others who are competent through attentive application of the problems to be understood.

There are two kinds of Kodachrome negative film. That which is used for "Daylight Exposure," and that which is used for "Artificial Light Exposure." Both of these films can be reversed successfully in their use with the application of the proper filter and altered exposurers, increasing the complication of thought process and meter manipulation.

In using "Daylight" Kodachrome, the exposure is governed by the natural light of day according to its density and color at a specified time of day.

In using "Artificial Light," exposure is governed by the amount (quantity) and placement of light by the operator, as well as the KIND of light. The KIND of light recommended by the manufacturer is the ONLY kind of artificial light to use.

It is also well to discard the many traditions and legends dealing with the mysterious intricacies of Kodachrome to be avoided. This influence of tradition, born of the failure of skeptics, has created a barrier of mystery around Kodachrome that has discouraged many beginners in their attempts to make use of it as an agent for color reproduction. There is nothing formidable about the use of Kodachrome film, it possesses no intricacies to explore. It is a medium of photographic, reproductive material, as simple to use effectively as any black-and-white negative material, when common sense intelligence is applied to its use.

A careful study of art literature of recognized merit, together with frequent visits to art galleries where the paintings of distinguished artists are on display, as well as an analysis of the color reproductions in the best magazines, will be of inestimable aid in establishing a balance of color sense in the mind of the individual desiring to reproduce color subjects through the medium of Kodachrome photography.

A scene such as the one above deserves careful use of exposure meter, says the author.

As the artist uses his brush and colors to create the light and shade of roundness and depth in transferring to his canvas the composition of his mind-idea, so the color-photographer must create out of his mind the composition of his object, with light and shade, roundness and depth in color balance, to meet the requirements of his film-medium with exposure that will be in harmony with the light-density falling upon the subject he photographs.

Of all the manipulations that governs success for the color-photographer, the right exposure is the one that will either make success or failure the final result. There is no rule-of-thumb that controls this very important procedure. Exposure of color-negative film cannot be an automatic procedure because there are no two subjects that can receive the same treatment. Each subject must receive the same careful consideration that the first successful attempt received. The detail of exposure should be carefully noted and preserved for guidance in future work.

The use of meters is very necessary to determine approximate-correct exposure for Kodachrome. Time of day influences color-balance as well as the character of light at any specified time of day. This applies to exterior (out-of-doors) work.

For the serious minded color-photographer, a Color Temperature Meter is almost indispensable. With it he can check the color balance of all light sources. He can determine the correct "temperature" of the color being reflected from his subject, or the color-influence caused by the light falling

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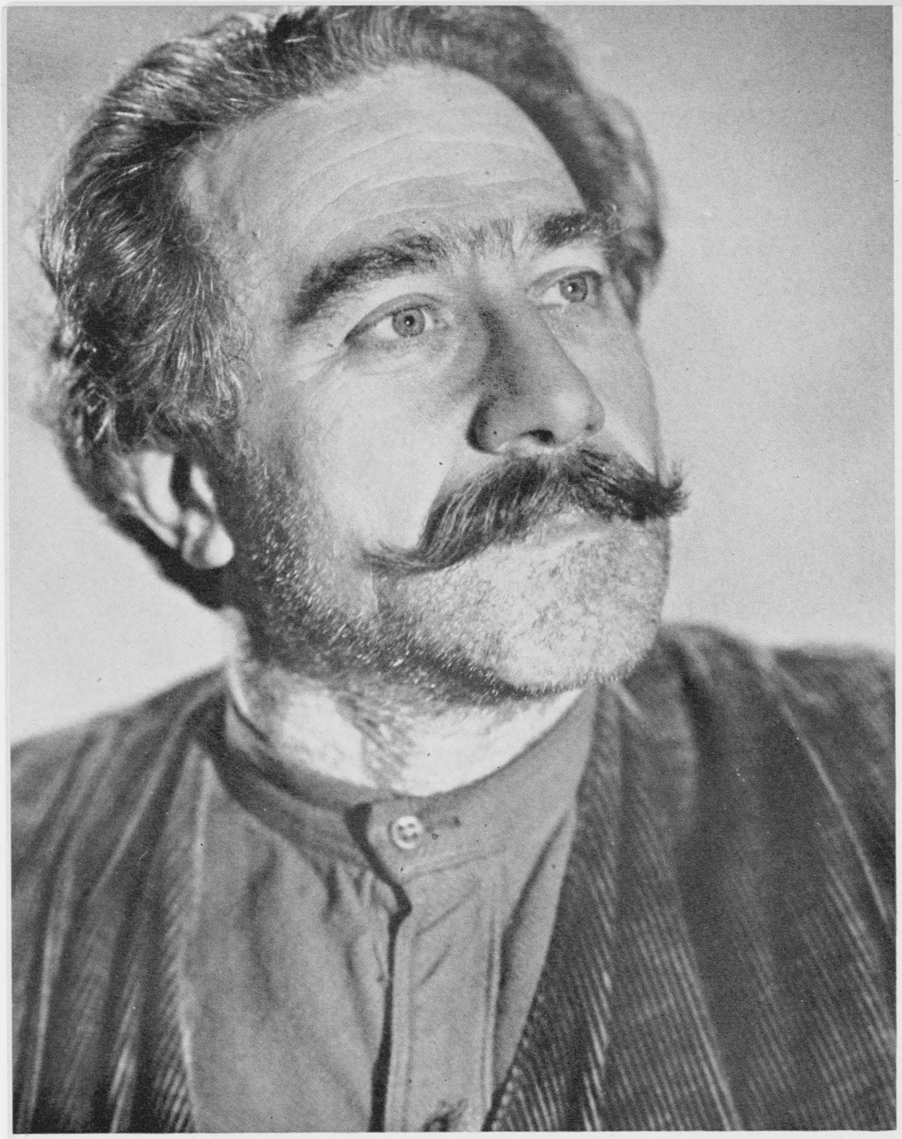

Manart Kippen as the father of the first miracle child in "The Song of Bernadette".

Television Needs Hollywood's Ace Cinematographers

By HAL HALL

TELEVISION, like the ending of the war, is just around the corner. When the war is over television will be with us in a big way. Undoubtedly, television is destined to become one of the greatest mediums of entertainment and of news dissemination. Today practically everyone in the entertainment field is wondering what effect television will have on the picture industry and radio broadcasting.

On all sides you hear people talking about television, but practically all the conversations are extremely vague. Engineers speak of wave bands and mathematical equations, but rarely does anyone come down to earth and discuss the practical problems of television. You hear of television acting technique, but nobody explains what it is. The other day, however, this writer happened to mention television to Manart Kippen, stage and screen actor, best known in films for his role of Stalin in "Mission to Moscow."

Kippen disclosed the fact that he acted in the first play that was televised over the N.B.C. station in New York City back in 1938, and that for several years he acted in and directed plays for televising over that station. He directed the first one-hour musical revue to go out by television. So, here, we thought, is a man who can tell us something about television technique and problems. He did.

"Television has come a long way," said Kippen. "Engineers and electrical geniuses have worked modern miracles, and will work more. BUT—television will never become perfect until Hollywood's top-flight cinematographers are brought in to solve the biggest problem in the successful televising of live plays.

"In all my television experience I was constantly hampered, as were all players, by the fact that all action had to take place in a very restricted area, due to lighting and photographic difficulties. Unlike working on a film set where all parts and people are properly lighted and are sharply in focus, players to be in focus for television, thus far, have to be right out front in what might be termed close-up technique. If one player stands slightly in back of another he appears fuzzy on the television receiving screen.

"You see, while the greatest engineering minds have been brought into the development of television, no on seems to have become aware of the fact that only cameramen of the Hollywood quality can work out the lighting and photographic problems. To date all the lighting is perfectly flat and horrible. Only one size lens can be used in the camera, and all backgrounds are fuzzy and out of focus. I am referring now only to televising plays as produced in the television studios.

"It seems to me that Hollywood's ace cameramen could quickly find a way to light television sets so they would get the same results they get in the film studios. I sincerely hope that these cinematographers get into television as soon as the war is over and television activities are resumed in full force. I expect to go right into television directing as soon as television gets under way again, and when I do I am certainly going to advise and insist that we secure the cinematic brains and skill of the men who photograph Hollywood's motion picture films. Until the lighting and photographic problems are solved the actors will be cramped and action will be stilted in all television plays.

"I firmly believe that television is going to become a great factor in our daily lives. I believe television will revolutionize present radio broadcasting. Instead of just hearing the news over the air, we will see it happening. Every radio listener will sit in an easy chair in his home and both see and hear the special radio programs the commercial sponsors put on the air. You'll see the Charlie McCarthy-Bergen program, or Burns and Allen, Jack Benny, etc. I believe eventually there will be no radio broadcasting of today's type; that it will all be visual.

"That television was rapidly catching the public's fancy until the war interfered is evidenced by the fact that when television broadcasts first were sent out in New York by N.B.C. in 1938 there were only 50 receiving sets in the receiving area. When the war broke out there were several thousand sets in that same area. Can't you picture what will take place in the future when every radio set will be equipped with a television screen. On Derby Day all America will see the running of that great Kentucky racing classic. We now have special radio broadcasts from the front lines of war. On D Day we heard broadcasts from the scene of the actual invasion. In future wars—if there be fu-

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Improving Vacation Movies

By GLENN KERSHNER, A. S. C.

THE home movie camera — either 16mm. or 8mm. — has become as much attached to the American home and vacationist as the tooth brush or the automobile. Not only does this personal camera enable one to bring home a record of a trip, but it tells the story of the trip or vacation better than would a million words.

Screening these pictures to one's friends brings much satisfaction to both the friends and the one who has made the picture—unless there are so many imperfections in the film that it requires a running explanation and apology. Then the movie maker no doubt wishes he had been a bit more careful in his filming; had taken a little more time, and had planned his picture before shooting.

After viewing hundreds of amateur movies I have come to the conclusion that more than fifty per cent of the amateur cinematographers do practically no planning, but merely pick up a camera and shoot. On the other hand, I have seen some beautiful films made by amateurs; films that any professional would be proud to say he had made. Those were photographed by amateurs who plan their films and then very carefully carry out the plan.

In planning your travel films include in your plan *the proper handling of your camera.* More bad travel pictures are made by improper handling of the camera than by any other means. Do not pick up your camera and start to quickly shoot without the use of a tripod unless it is absolutely necessary. When you hold the camera in your hands it is likely to jiggle just when you want it to be steady, and often it is off level. Sometimes you can almost see the cinematographer breathe by watching the rising and lowering of the picture on the screen when the cinematographer has held the camera against his chest while photographing the scene.

Most vacation scenes can be made with a tripod, so why not use one and have steady pictures with composition of which you can be proud? Rarely can you have excellence in composition without the aid of a tripod.

Another factor to watch in filming your travel and vacation movies is the making of "pan" shots. Most amateurs have a tendency to "pan" too fast. In fact, many movie makers give you the impression they literally swung their camera around. "Pan" shots that are too fast are very annoying on the screen, and invariably call for apologies.

Some amateurs have told me they do not know how to figure out the speed most pleasing in "panning." Here's a suggestion that might be of help. Suppose you are standing in the center of a room in which there are many windows. Say the wall space between each window is six feet. Close your eyes for a moment, then open them and look out one of the windows. How long does it take you to see everything outside that window? Use a stop watch and you will be able to know to the second. Repeat this procedure through every window in the room as you turn in a circle. When you have finished, you will know how long it should take you to make a "pan" shot that would cover the same space you looked at through the windows. You will discover if you whip your eyes around the room as fast as you make a lot of your "pan" shots that you won't be able to see everything.

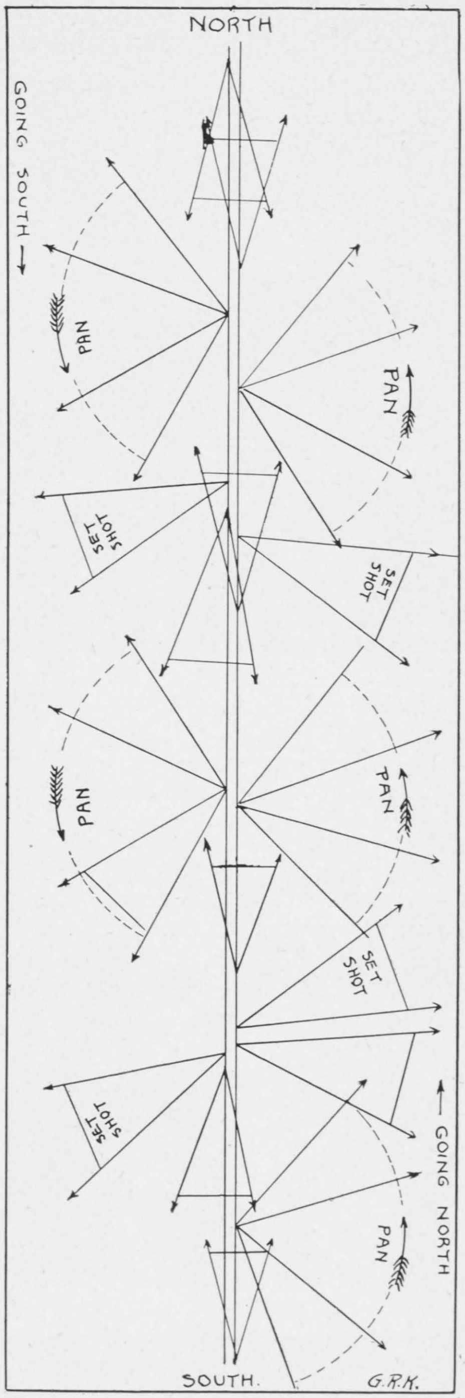
If you still have a tendency to "pan" too fast, set your camera at a faster speed and open the stop just a little more. Seldom do I "pan" a 16mm. or an Eyemo without setting the speed a little faster. This will slow down the action in the projection.

Now that we have finished with the fast "pans" let's take up the matter of travel continuity so that the "pans" of your travel picture will take the audience in the same direction you are traveling—so the audience will not feel they are going South one moment and then suddenly get the impression the car is backing at a terrific rate North.

For a number of years I made the Ford Educational Weeklies which took me across and up and down the United States many times a year. While on this job I worked out a system which you will see in the accompanying illustration.

Suppose you are going to make a trip from Hollywood to Seattle, Wash., and back. You start North and make all your "pans" on the right side of the road, panning from South to North. Then make some set shots, as indicated in the illustration. When you make these set shots be sure you use a tripod and keep your camera level. Should you see a shot on the left side of the road, going North, which you would like to "pan," "pan" it from North to South. This you will cut into your pictures you make on your return trip, so the "pan" to the Southward will be in continuity with the Southward movement of your trip.

Another suggestion to improve your "pan" shots. Study the shot carefully before you start shooting. Select a piece of excellent composition to start the "pan," and also select in advance the exact spot at which you will stop your "pan." That, too, should be something with pleasing composition. Take plenty of time to figure out your shots and you will be much happier when you get back home and are showing your films to your friends.



Above, Glenn Kershner's drawing to assist amateurs in making "pan" shots.

Another don't:—Never start to pan back again over the same scene. The only excuse you can offer for panning back is that you thought you might have gone by the scene too quickly. Take your time, "pan" slowly, and whenever possible use a tripod.

In the next issue of the *Cinematographer* I will take up the topic of exterior composition.

Kodak Announces Fastest Film For News Photographer

THE fastest film ever made available for the news photographer, who must, at times, work under extremely adverse light conditions, or for other work which must be made at fast shutter speeds with illumination that would be inadequate with the ordinary fast film, is announced by the Eastman Kodak Company.

This film, known as "Super Panchro-Press—Sports Type" is a modification of "Super Panchro-Press, Type B" which will still be supplied for all general work.

When developed as recommended, "Super Panchro-Press—Sports Type," is about twice as fast as the "Type B." As a result of the great increase in speed there is a slight increase in graininess and a slower rate of development.

For many sports pictures where ordinary high speed film is employed, it is necessary under adverse light conditions to use the lens at its widest aperture to compensate for the poor light and to gain maximum exposure with the high shutter speed that is required to stop the fast action.

With a "wide open" lens, depth of field is naturally limited. With the speed of "Sports Type" Film, however, a smaller lens aperture can be used and this results in a decided gain in overall sharpness.

Here are speed and recommended meter settings and recommended development in Kodak DK-60a.

Kodak Film Speed		Recommended Meter Settings*		
			Weston	G.E.
Daylight...	1000	Daylight...	200	320
Tungsten ..	800	Tungsten ..	160	250

* When exposure must be reduced to a minimum, these settings can be doubled with little danger of serious underexposure.

Color Sensitivity: Panchromatic, Type B.

Filter Factors: (Correction Filters, Sunlight, K2; Tungsten, X1.)

	K1	K2	G	A	B	C5	X1
Sunlight	1.5	2	3	7	7	5	...
Tungsten	1.5	1.5	2	3.5	7	10	3

Recommended Development:

Kodak Developer	Continuous Agitation (Tray) 68°F. (20°C.)	Intermittent Agitation (Tank) 68°F. (20°C.)
DK-60a	6 minutes	8 minutes
D-19	5½ minutes	7 minutes
D-72 (1:1)	4 minutes	5½ minutes

These pictures, at left, taken at the Aqueduct track in New York were shot in the late afternoon on Kodak's Super Panchro-Press—Sports Type, with a 17-inch telefoto lens at 1/1000 of a second at f/16. The speed of the film permitting the relatively small lens aperture, resulted in the extreme depth of field. Each enlargement made from a PORTION of a 4x5 negative.

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To Be Said About
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Is That It Is
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Therefore — —
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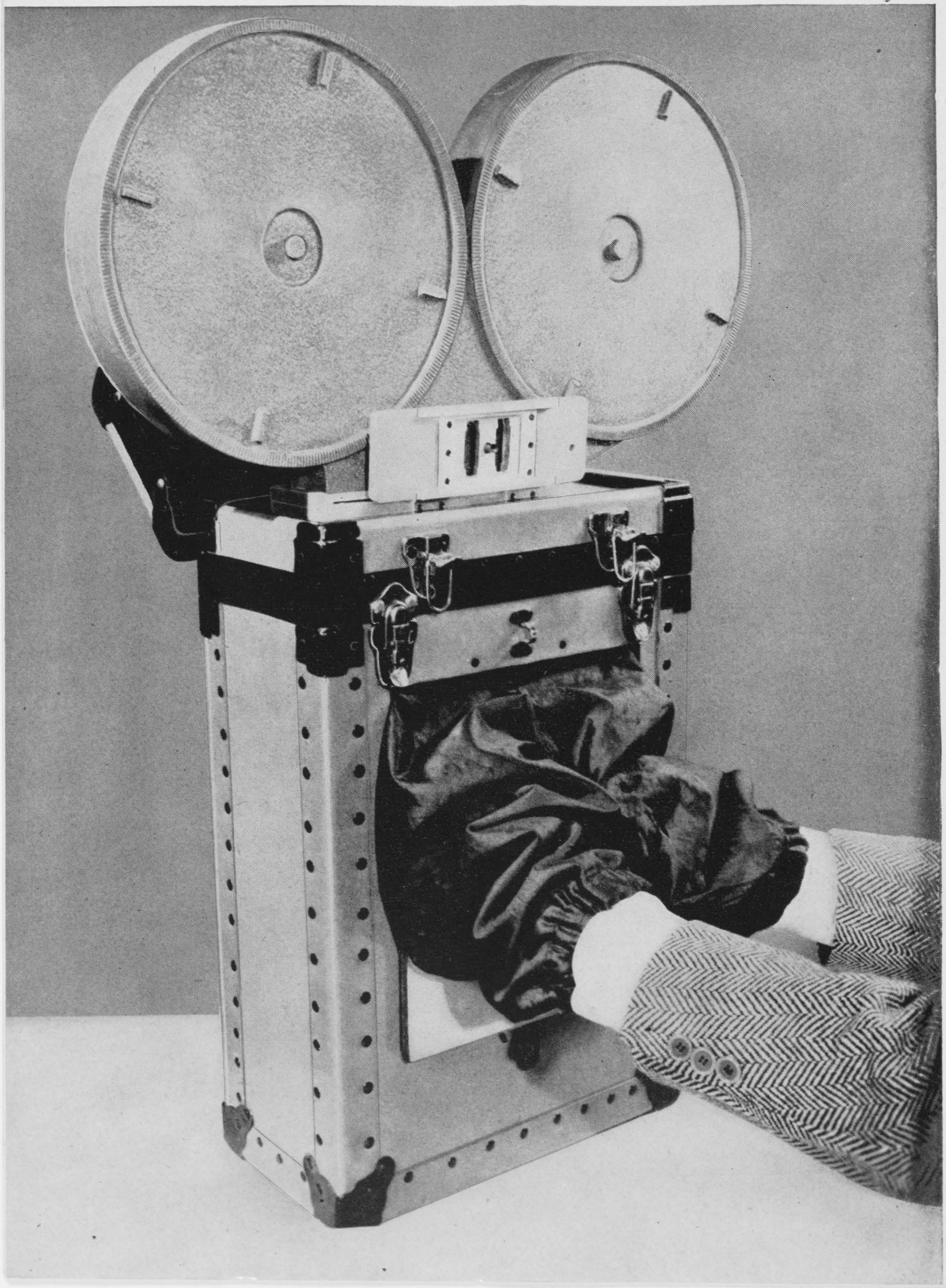

The New Removable Head

★ The new removable head featu
"Professional Junior"* Tripod. It is
type head from the tripod legs base
fastening nut. The tripod head can
adaptor for low setups.

The friction type head gives super
and 80° tilt. A generous sized
service. "Spread-leg" design affords
adjustments. A "T" level is built int
be set for 16mm E.K. Cine Special,
B & H Eyemo (with motor), and with
head is unconditionally guaranteed
Junior"* Tripod With Removable
be sent upon request.

Field Dev

★ The kit serves as a portable dark
motion picture film in the field or
400 ft. and 1000 ft. Mitchell, Bell
adaptor is available for Cineflex m
with three special size thermos b
More complete descriptive data wil

"Professional Junior"* Tripods, Deve
Gauges made by Camera Equipme
Bases, Signal Corps, Office of Strat
also by many leading Newsreel co
producers.

* Patent No. 2318910.

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IOR"★

"HI-HAT"

"Professional Junior"* Tripod

dds great flexibility to the versatile
possible to easily remove the friction
simply unscrewing a finger-grip head
be mounted on a "Hi-Hat" low-base

oth pan and tilt action,—360° pan
d trunnion assures long, dependable
st rigidity and quick, positive height
s superfine tripod. The top-plate can
or without motor; 35mm DeVry and
without alignment gauge. The tripod
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for developing hand tests of 35mm
ocation. The kit is equipped to take
owell and Wall magazines. A special
zines. The developing kit is furnished
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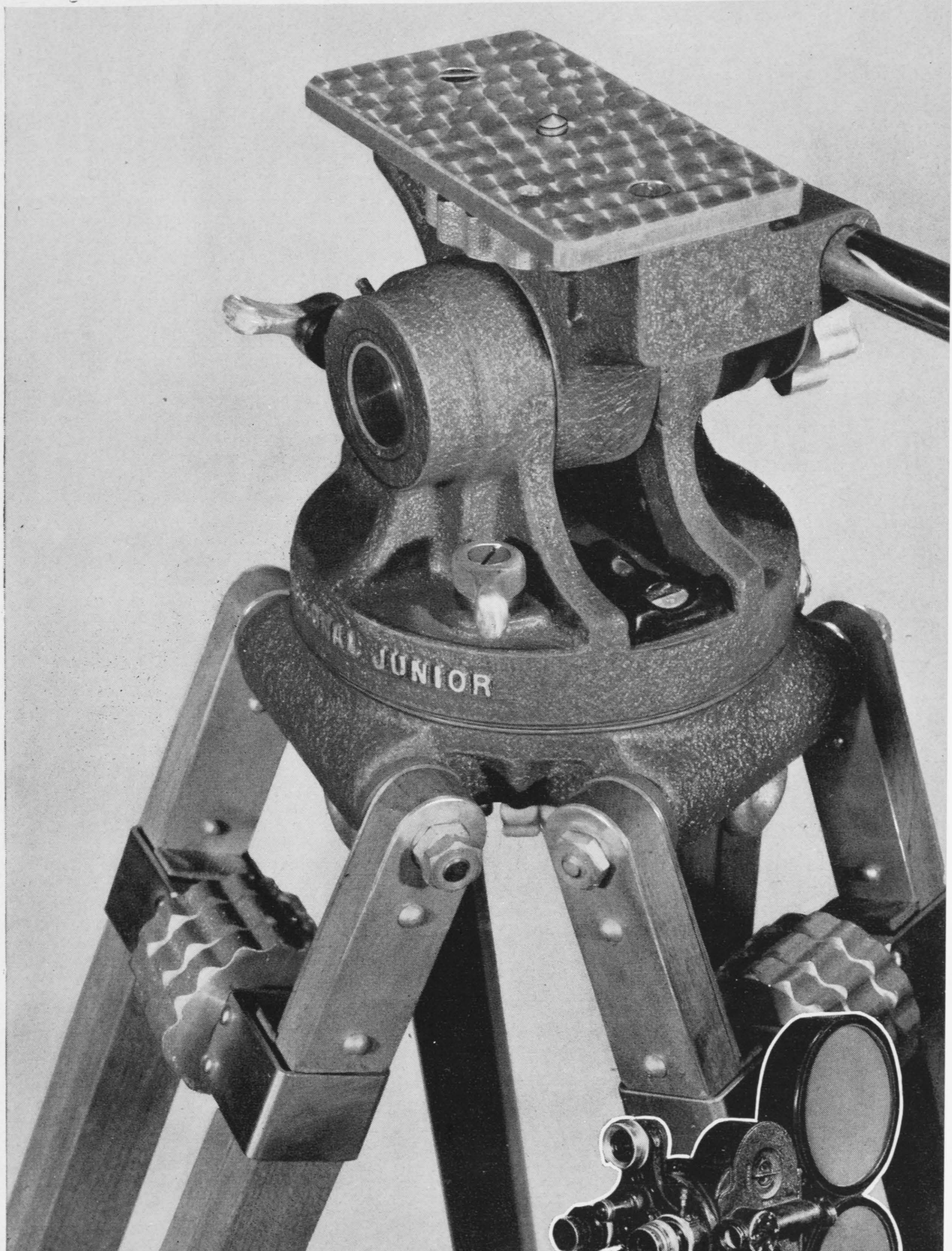


"Hi-Hat" and Shiftover Alignment Gauge

★ Illustrated is the B & H Eyemo camera mounted on the Shiftover Alignment Gauge and "Hi-Hat" low-base adaptor. The "Hi-Hat" low-base adaptor takes the "Professional Junior"* tripod head for setups where the tripod legs cannot be used. The Shiftover device (designed by Camera Equipment Co. and patent applied for), the finest, lightest and most efficient available for parallax correction for the Eyemo Spider Turret prismatic focusing type camera. The male of the Shiftover attaches to the camera base permanently and permits using the regular camera handle if desired. Further data about the "Hi-Hat" and Shiftover will be sent upon request.

THROUGH the EDITOR'S FINDER

ON July 6th, Colonel S. W. Stanley, Signal Officer, 9th Service Command, presented the Research Council of the Academy of Motion Picture Arts and Sciences with a Certificate of Appreciation from the War Department and the Chief Signal Officer for its cooperation in the war effort. Of particular significance to those interested in motion pictures were some of his remarks.

"As was anticipated long before this war began, photography has become one of its mighty weapons on the front, behind the lines and at home," said Col. Stanley: "The value of film as a record of action in war had already been demonstrated, but the great possibilities of film as a training aid had not begun to be fully appreciated until a relatively few years before the beginning of the present emergency.

"The use of training films has now developed into one of the most potent factors of the Army training program. By this means, the technique of training has been virtually revolutionized. Visual training aids have demonstrated conclusively that they could in less time teach more, that could be remembered longer, than any other medium of instruction. Training films caught and held the interest of millions of recruits and gave them the confidence, so vital to war, to go out and do the job that was expected of them. The use of action pictures as training media and as valuable historical records, likewise had demonstrated their tremendous importance and effectiveness."

If training films can revolutionize the training technique of the greatest War Department in the world, what magnificent possibilities lie ahead for films in training for peacetime activities! If films can be used to teach men to kill and to destroy, how much more can they do to teach men to build, both physically and mentally, for a great peacetime future!

Now the Editor's face is really red!

On page 235 of the July issue of this magazine appeared an advertisement from J. E. Brulatour, Inc., distributors of Eastman Films. It SHOULD have read:

> 1944—
> This year marks
> The Fiftieth Anniversary
> Of the first public showing of
> Motion Pictures—

Imagine our embarrassment when we discovered—too late—that a typographical error, which we should have caught, made it the FIFTEENTH Anniversary.

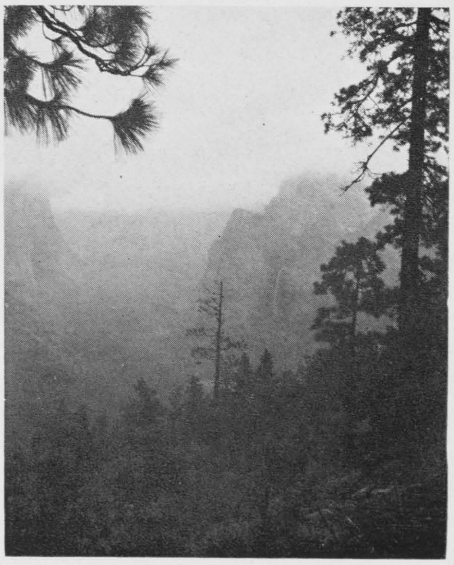
We're sorry.

CHRISTMAS may seem a long time away in the month of August, but if you who have relatives and friends in the fighting forces overseas do not start thinking about Christmas now those fighting men may not receive the presents you want them to have on Christmas.

The Army and Navy Departments have designated the period between September 15 and October 15 as the time for mailing Christmas packages and Christmas greeting cards to the men overseas. So, you should start your Christmas shopping for overseas RIGHT NOW. The following communication from the Post Office Department is of vital importance to those boys at the fighting fronts:

"Mail is medicine. Don't delay its use for our armed forces. Their Christmas parcels and Christmas cards should be mailed as early as possible. Furnish our overseas personnel with medicine they will appreciate . . . your mail. The Post Office Department will accept overseas parcels for mailing from September 15th through October 15th. Be sure that all parcels meet the various postal requirements as to size, weight and careful wrapping. Christmas cards should be sent only as first class mail and are to be mailed during this period. Give them your zone number so your answers will not be delayed. Use V mail for personal correspondence. Be sure to address all parcels correctly, including the addresses on the inside wrapper as well as on the outside. Let's not disappoint our boys overseas by mailing either incorrectly or late.

"Overseas mail affects the life of all America. Nearly five million boys are serving overseas in the various branches of the armed forces and in the Merchant Marine. It is estimated that each will receive an average of three Christmas parcels. To guarantee delivery by Christmas you are urged to mail your overseas parcels and cards as soon after September 15th as possible. October 15th is the final day for all overseas mail. Be sure to address your gifts distinctly and correctly, including a duplication of the addresses on an inside wrapper."



HANS KOENEKAMP, one of the best liked members of the American Society of Cinematographers, walked into my office the other day looking happier than I had ever seen him look before. When he showed me a letter he had just received from his son, Fred, stationed somewhere in the South Pacific, I knew why he was happy.

That letter, written to his Dad on Father's Day, was one of the finest letters I have ever read from a Son to his Father. I begged Koney to let me publish part of it, because I feel that every Father who reads it will be inspired. So, here are the first two paragraphs:
"Dear Dad:

A rumor has been started here that today is Father's Day. I really don't remember the date, but I don't want to take any chances. This letter, no matter if it's early or late, will mean the same. I find it very hard to find words that will tell you what I have in mind. When you get right down to it, I guess there are no words that really express a son's feeling for his Father. Not only do I want to thank you for the home, food, clothing, and my pride and joy, the car, but Dad, thanks for all the understanding, the advice and help to get me started in the world. You're tops, Father, and there's no getting around it.

"I hope to get married when I get home. I hope some day to have a home of my own. If I can make my wife and family as happy as ours is I will feel as though you had a lot to do with it. I hope to be a lot like you. A very happy Father's Day to you, Father, and may we be together on your next one."

No wonder Koney is proud of his son in the service!

WE are pleased to report that our last appeal to our readers for suggestions as to the kind of articles they would like to see in the Cinematographer has brought forth a very considerable number of replies. We shall try to give you what you have asked for, but please keep on sending in the suggestions. We need a lot more.

We could also use more stories from those mechanically-minded men who are building their own equipment. Perhaps you have perfected some unique gadget that is helpful. Send in pictures and description, and we will be glad to print it for the benefit of our readers.

Movies . . . Vital Records of War

THESE "stills" are typical of the motion pictures made by our Armed Forces. Photographic units, with which men from the motion picture industry are prominently identified, provide essential information of immediate tactical, technical, or strategic value. And these first-hand motion pictures have tremendous morale value when released for public showing.

★ (Left) Invading the Marshalls. Photo by U. S. Army Signal Corps.

★ (Below) Advancing at Tarawa. Official U. S. Marine Corps Photo.

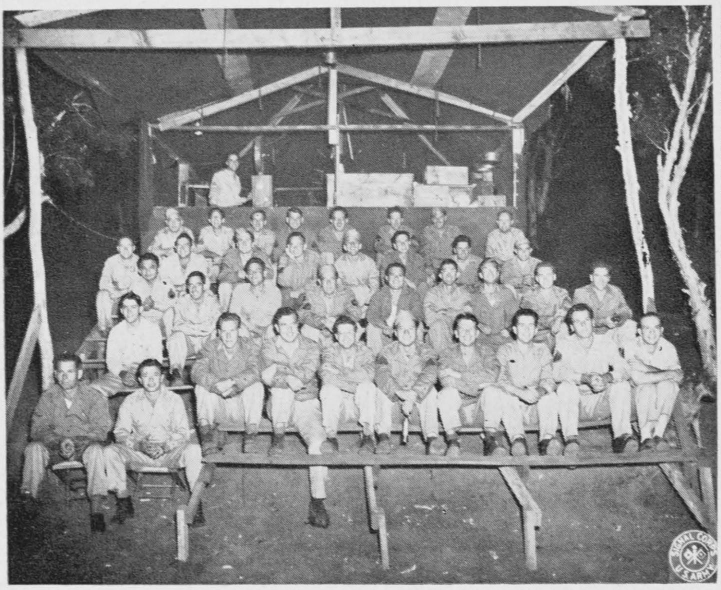
One of a series of advertisements by KODAK testifying to the achievements of the movies at war

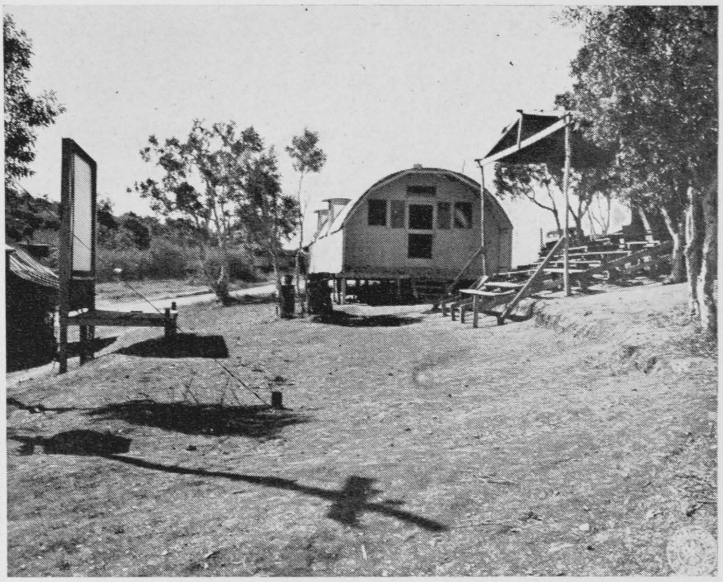
★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

EASTMAN KODAK COMPANY, Rochester, N. Y.

J. E. BRULATOUR, INC., *Distributors*
FORT LEE CHICAGO HOLLYWOOD

Army Movie Theatre In The South Pacific





Above photo shows arrangement of screen and seats of the improvised theatre built by enlisted men of the 4th Sig. Photo Lab Unit, New Caledonia, South Pacific. The screen size is 7½ feet x 9½ feet. The throw is 47 feet. (Photo by Pvt. Stickley.) Upper left photo of the men of the unit enjoying the show was made by T/5 Frank Saraceno.

ENLISTED men of the 4th Signal Photo Laboratory Unit have built an outdoor theatre near their living quarters on the Island of New Caledonia in the South Pacific, and are seeing movies under primitive conditions, yet with the best sound and picture quality in the entire South Pacific.

Using a screen made from a piece of salvage canvas, and a projector and sound system put together from available sources, technicians of the Unit have obtained results which in the opinion of the technical experts are comparable to the best deluxe theatre quality obtained in the States.

Most of the members of the Unit are studio technicians enlisted in the Reserve Corps under the sponsorship of the Military personnel Committee of the Research council of the Academy of Motion Picture Arts & Sciences. The unit is commanded by Major Gordon S. Mitchell, in civilian life Manager of the Research Council.

Pictured here attending the movie at the 4th Signal Photo area from left to right:

Pvt. Harry M. Anderson, foreman, North Dakota; Pfc. Frank Nowibilski, Chicago, Illinois; 2nd Row: Pfc. Clyde S. Jenkins, Morgantown W. Va.; Pfc. Jack H. Brookshaw, Elmwood, Wisconsin; Pvt. Cleve R. Smith, Hollywood, Calif.; Pvt. Raymond E. Cox, Evansville, Indiana; T/4 Philip de Lara, Hollywood, Calif.; Pvt. Charles W. Stickley, Philadelphia, Pennsylvania; Pfc. Alexander J. Madison, New York City; T/3 Herman H. Fischer, Hollywood, Calif.; Pfc. Anthony J. Rapisarda, Brooklyn, New York City; 3rd Row: S/Sgt. Fred Rola, New York City; Pfc. Robert Platt, Ware, Massachusetts; Pvt. A. W. Smith, College Corner, Ohio; S/Sgt. Oram K. Wetzel, Hollywood, Calif.; Pvt. John W. Moore, Bessemer, Alabama; Pvt. Frank Episcopo, Wilmington, Delaware; Pvt. Joseph J. Downey, Brooklyn, New York; Cpl. Otto J. Enslen, Milwaukee, Wisconsin; Sgt. Frank L. Reed, Ravenna, Ohio; 4th Row: Pvt. Elmond Clark, Whelan, New York; Pvt. Erie Clark, Whelan, New York; Pvt. Alan Dienhart, Hollywood, Calif.; Cpl. Robert Christianson, Ogden, Iowa; Pfc. Edmund J. Galanty, Detroit, Michigan; Pvt. Irwin W. Meyer, Los Angeles, Calif.; Pfc. Vartan Chirvanian, Bogato, New Jersey; Pfc. Harry Richmond, Brooklyn, New York; 5th Row: M/Sgt. William Claridge, Hollywood, Calif.; T/s Malcolm Bulloch, Hollywood, Calif.; T/4 William Robertson, Hollywood, Calif.; T/5 Marvin H. Sigwind, Benkelman, Nebraska; Sgt. Robert W. Gibbs, Uehling, Nebraska; Captain Raymond Windmiller, Hollywood, Calif.; Major Gordon Mitchell, Hollywood, Calif.; Sgt. James Court, Santa Barbara, Calif., running the projector.

Attention, Please!

THE two tables that appear on this page as "Table I and Table II" were omitted from Mr. L. H. Bedford's article on "Television Picture Definition," which appeared in the June, 1944, issue of the CINEMATOGRAPHER. We print the tables now so that those who are interested in the article will have them to refer to.—The Editor.

TABLE I

Illumination	α_1	α_3	α_5
50 lux approx.	1/2000	1/1300	1/1410
200 lux approx.	1/2200	1/1695	1/1680

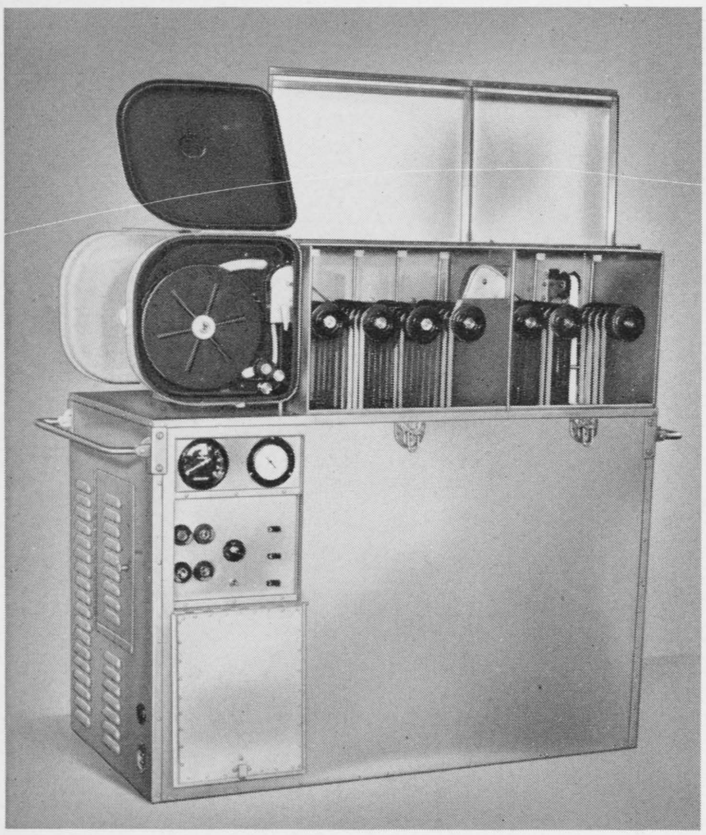
TABLE II

Vertical Viewing Angle.	*n* (net)	*R.*	*N.*	*T.*	*f.*	Remarks
1/6	450 (s)	5:4	254,000	16 m.s.	7.94 Mc/s	Sat.
1/6	675 (i)	5:4	254,000	32 m.s.	5.95 Mc/s	Sat.
1/10.5 (sat)	385 (i)	5:4	82,000	32 m.s.	1.92 Mc/s	B.B.C. Service
1/8.1 (sat)	500 (i)	5:4	139,000	32 m.s.	3.26 Mc/s	
1/4	675 (s) 1000 (i)	4:3	600,000		14.0 Mc/s	Kinema

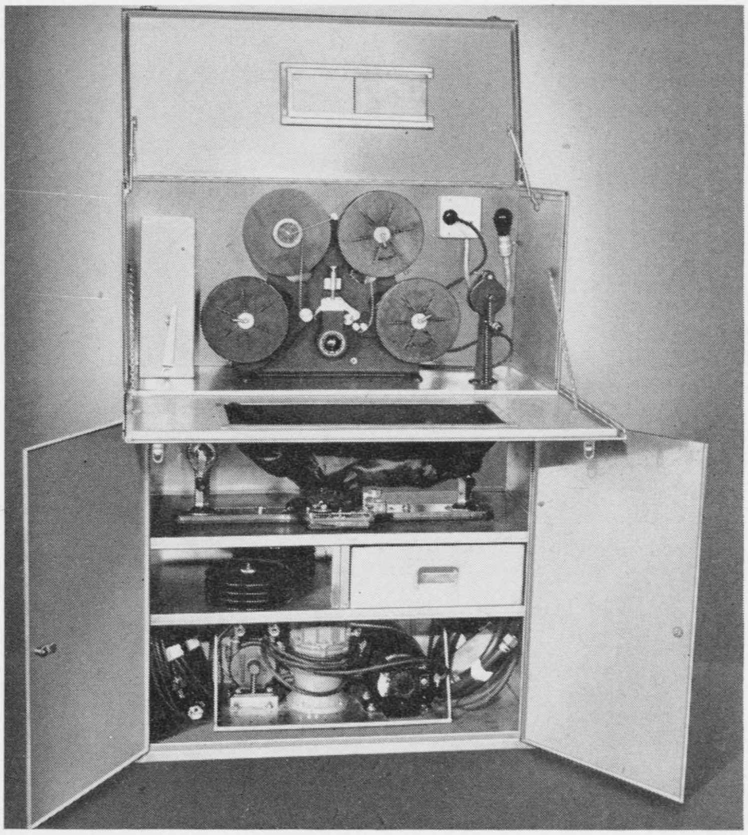
s = sequential scanning. i = interlaced.

The Houston Corporation

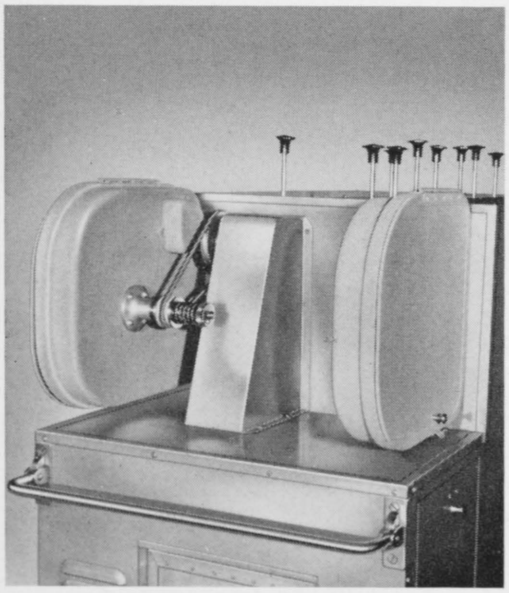
11801 West Olympic Blvd.   Los Angeles 25, California



Processor with solution tank covers open.



Darkroom as packed for shipment but showing printer threaded as for operation.



Close-up of loading and take-off magazines.

The Houston Model 9 Processing, Printing and Editing Kit for 16mm Motion Picture Film.

This machine is for negative or positive film; capacity 120-360 feet per hour. Cycle of processing is accomplished in 35 minutes, including drying. Designed for portability and limited space and measuring only 18" by 37" by 36½". Any of the components of this kit may be purchased separately. See story and other illustrations on pages 5 and 6.

FROM CAMERA TO SCREEN — HOUSTON

Motion Picture Studio and Laboratory Equipment—Developing Machines—Printers—Camera Cranes and Dollies
Miniatures—Mechanical Sets—Engineering and Design Work—General Machine and Jobbing Work

AMONG THE MOVIE CLUBS

Westwood's Exposition

George Loehrsen, in charge of general promotional activities, has asked us to extend to all movie makers and movie clubs a cordial invitation to attend the Third Annual Amateur Movie Makers Exposition, sponsored by the Westwood Movie Club of San Francisco. The Exposition will be held Friday evening, September 29th, at St. Francis Community Hall, San Fernando and Ocean Avenue, San Francisco.

For the past two years this event has been known as the Gadget Exposition. Gadgets will again be featured. but in streamline fashion under the guidance of Eric Unmack, gadget chairman. Jesse Richardson heads the committee which will select the top-flight amateur films to be screened that evening.

The Technical Committee, under chairmanship of Dr. I. C. Gobar, is planning a short, unique stage presentation, details of which will be kept secret until the presentation is made. Fred Harvey will be Master of Ceremonies. Chairman of the Exposition is Club President Don Campbell. Others in key spots are Miss Edna Spree, publicity; Joe Pissott, program.

San Francisco Club

President Louis M. Perrin of the San Francisco Cinema Club reports that the July meeting of his organization was an interesting one. Of particular interest was the screening of films the members made in the zoo on their recent field trip.

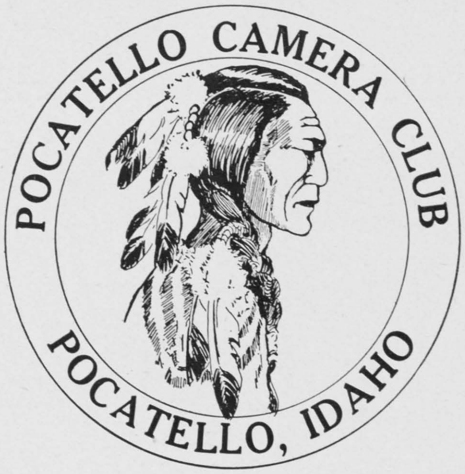
Ed Sargeant showed 800 feet of 16 mm films of Kicking Horse Trail in Canada, Waterwheel Falls on the Tuolumne, and Boulder Dam. Closing the program was "Arizona Holiday," made by President Perrin on 8 mm. The film includes a boat trip up Mead Lake into the lower Grand Canyon.

Southern Cinema Club

Southern Cinema Club held two meetings during July. One was a picnic meeting at Southgate Park. After lunch the members spent the afternoon shooting pictures. The second meeting was devoted to the viewing of uncut films of the members.

La Casa Club

Close to 200 persons attended the July meeting of the La Casa Movie Club of Alhambra, California. The program of films consisted of "Mt. Shasta" by D. E. Arnett, "Indian Dances" by H. A. McHenry, "Scenic Utah and Parks" by Earl Martin, and a Walt Disney film, "The Amazon Awakens."

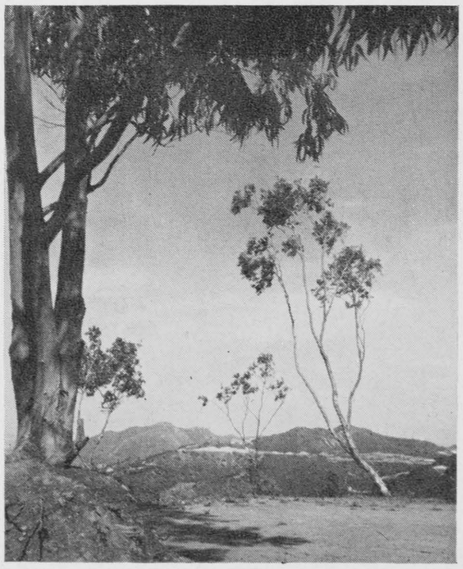


Pocatella Camera Club

A large group attended the fourth meeting of the newly organized Pocatello Camera Club at which a contest was held for the best print depicting the name of the club. The contest was won by R. E. Brown, and the print is reproduced on this page of the Cinematographer.

The print has been adopted as the emblem of the club and will be imprinted on all dues cards and club stationery. The emblem consists of the head of Indian Chief Pocatello in a double circle, within which is printed the name of the club.

In addition to winning the contest, Mr. Brown gave an illustrated lecture on "Essentials of Photography." He used 33 slides as illustrations. Two films were also screened: "Our Flowers" and "Hunting and Fishing in Idaho."



Trees

Brooklyn Club

The following officers have been elected by the Brooklyn Amateur Cine Club for the forthcoming year:

President, Horace Guthman, reelected.

Vice-president, Herbert Erles.

Secretary, Mrs. Beatrice Katz.

Treasurer, Francis Sinclaire, reelected.

Board of Directors: Charles Benjamin, Irving Gittell and Charles J. Ross.

Utah Cine Arts Club

Five films were screened for the members of the Utah Cine Arts Club at the July meeting. They were "Dog Daze" by George Brignand; "4 Gallon Vacation" by Keith Walker; "Once Upon a Midnight Dreary" by Pete Larsen, and two films from the Coordinator of Inter-American Affairs. The latter were "The Bridge," a documentary film on the transportation problem in South America, and "Wealth of the Andes."

Tri-City Club

At the last meeting of the 1943-44 season, the Tri-City Cinema Club elected the following officers for the coming year:

President, Tom Severs of Moline.

1st Vice-president, A. R. Bruns of Davenport.

2nd Vice-president, Margaret West of Davenport.

Sec'y-Treas. Spitznas of Moline.

Trustees: Harry Lytle of Davenport, Ward D. Paley of Rock Island, and Mrs. Charles Snyder of Rock Island.

The club now reports a membership of more than sixty movie makers.

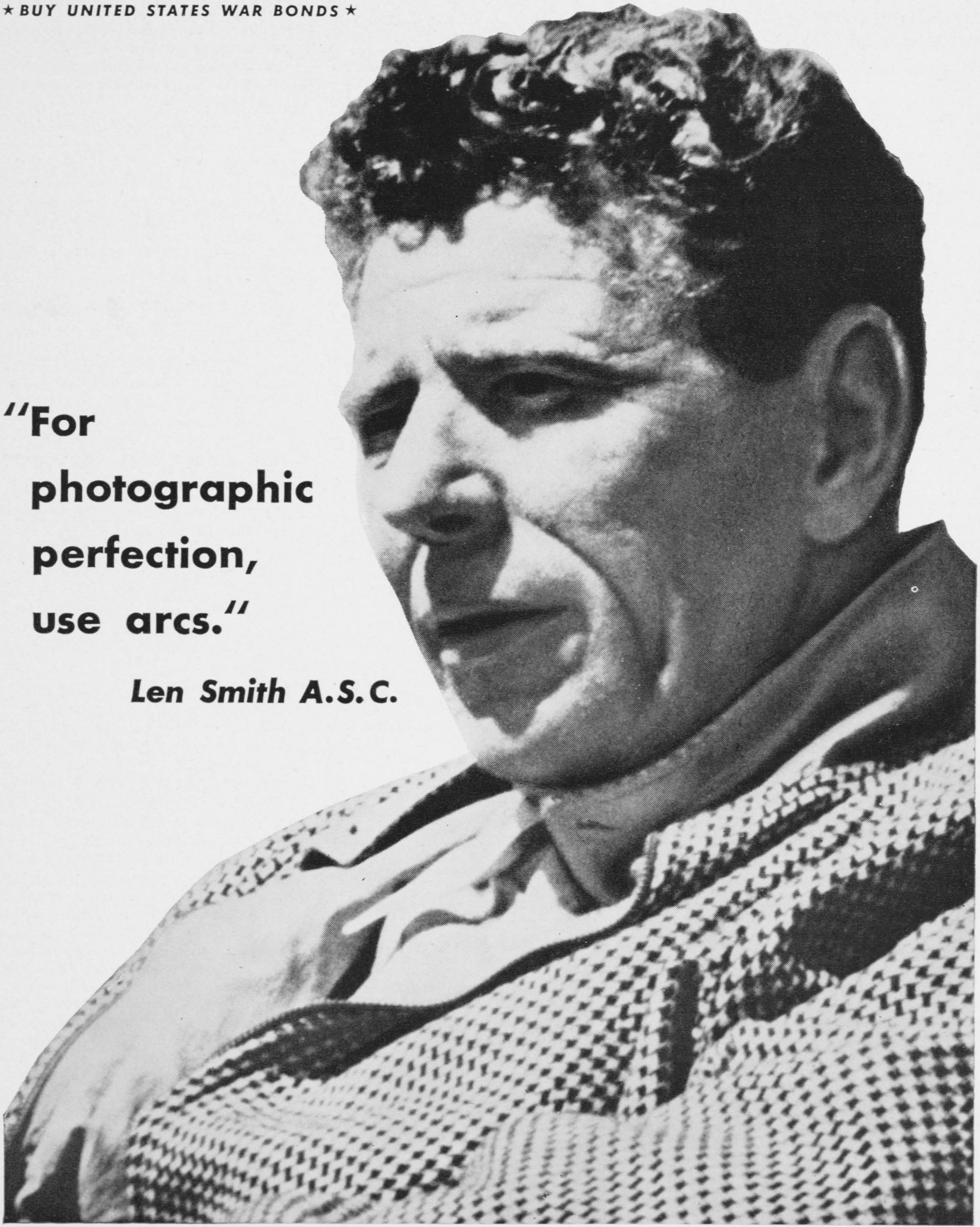
Syracuse Movie Makers

Highlighting the July 5th meeting of the Syracuse Movie Makers was the first showing of the new 16mm Ansco Color film in Syracuse. Two projectors were lined up and one projected Ansco Color, the other Kodachrome, at the same time. Ansco Color was projected on one half the screen; Kodachrome the other half. Further tests will be made by club mambers in the near future.

Also on the program was a film of a golf match between Bob Hope and Bing Crosby, made by Donald Steves of the Long Beach Cinema Club. This was followed by a U. S. Signal Corps newsreel of the Normandy Invasion. A scenic of Bryce Canyon closed the meeting.

Please send your club news early

★ BUY UNITED STATES WAR BONDS ★



"For
photographic
perfection,
use arcs."

Len Smith A.S.C.

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide and Carbon Corporation

UCC

General Offices: 30 East 42nd Street, New York 17, N. Y.

Division Sales Offices: New York, Pittsburgh, Chicago, Atlanta, Dallas, Kansas City, San Francisco

Recent Advances In The Physics of Color

(Continued from Page 259)

ber of papers, two were cut from the same sheet but submitted as different batches, the readings showing a repetition accuracy to within 0.1%.[4]

ALTERNATIVE COLOR SPECIFICATION SYSTEMS

Turning now to the criticism of the form of the C.I.E. resolutions, measurements made by MacAdam[5] of the standard deviation of colour matching in various parts of the colour triangle give a measure of the noticeability of colour differences, and indicate that the C.I.E. triangle is for example very bad for purposes of estimating errors of reproduction.

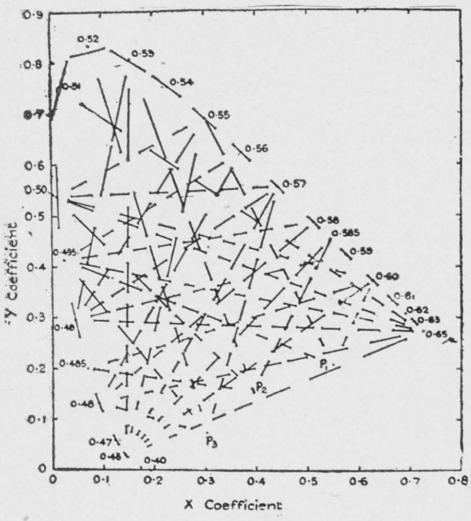


Fig. 2. Comfortably noticeable color differences plotted in the C.I.E. triangle. Observer, W. D. Wright.

Wright has obtained comparable results[6] which are shown in Fig. 2. Though they refer to comfortably noticeable differences of colour in mixtures of pairs of spectral lights, they agree in the main with those of MacAdam. Wright has pointed out[7] that the lack of agreement where it exists is significant, notably in the colours between blue and red (purples and magentas).

The same results of Wright's are plotted again in Fig. 3 on a modified colour triangle due to Breckenridge and Schaub[8] which they call the Rectangular Uniform Chromaticity Scale triangle. This is a projective transformation of the C.I.E. triangle. There is a lot of room here for experiments on the effects of field size, adaptation, contrast, brightness level and so on, before these results can be applied with confidence to questions of color reproduction.

COLOR CINEMATOGRAPHY

I should like to comment on a few points about additive and subtractive processes. For kine-projection subtractive processes hold the field, and the main reason for their superiority is the fact that highlights can have an optical density of only 0.04 as in black-and-white, while an additive process has a luminous efficiency of the order of 30% whether it be a mosaic screen, sequential or triple projection, corresponding to a highlight density of 0.50. Members of this Society will not need to be reminded that screen brightness is a paramount consideration.

Unless something startling by way of illuminants or projection optics is forthcoming, the position will stay as it is. It is possible that we shall get even higher aperture lenses using the new types of optical glass now becoming available, sufficient to make additive processes quite satisfactory for projection, but of course subtractive processes would gain as well, and we may expect that manufacturers will concentrate on subtractive methods.

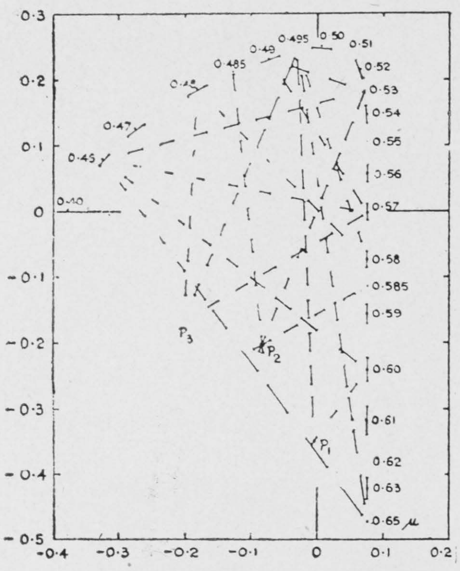


Fig. 3. Comfortably noticeable color differences plotted in the R.U.C.S. triangle. Observver W. D. Wright.

THE FUTURE

In common with most physicists I would rather make warning prophecies than over-optimistic ones, but there are several things which I hope we may see in the next few years. With all the activity there is in the preparation of dyes, we can hope to advance towards the theoretically desirable characteristics of subtractive dye images. The mathematical theory of color masking correction is ahead of its practical application; one can hope that the theory will be unified and made more intelligible, and simpler practical methods developed for carrying out masking. We are already beginning to get experimental observations on the relative importance of residual reproduction errors, and it would be very desirable to push that work along with considerable vigor.

Lastly, the need is now being recognized more widely[9] for relating the complex processes of vision to the physics of color photography before one can know how to produce a reproduction giving the same subjective appearance as the original scene, or a desirable illusion of fantasy.

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4. V. G. W. Harrison. Proc. Phys. Soc. 54, 1942, p. 86.
5. D. L. MacAdam. Journ. Opt. Soc. Amer. 32, 1942, p. 247.
6. W. D. Wright. Proc. Phys. Soc. 53, 1941, p. 93.
7. W. D. Wright. Journ. Opt. Soc. Amer. 33, 1943, p. 632.
8. F. C. Breckenridge and W. R. Schaub. Journ. Opt. Soc. Amer. 29, 1939, p. 370.
9. R. M. Evans. Journ. Opt. Soc. Amer. 33, 1943, p. 579.

Color Filters and Their Use

(Continued from Page 260)

100% ND—Extreme contrast neutralizer; same action as 75% ND but with greater softening effect.

200% ND—Extreme contrast neutralizer; same action as 100% ND but with still greater degree of softening effect; requires very strong sunlight to be used; in combination with 88 A is used as a sun viewing glass.

Neutral Density filters are neutral in their action on all colors; they provide a means of reducing the light transmission through the lens, necessitating the opening of the lens diaphragm, which naturally produces a softening effect similar in action to neutralizing contrast.

Pola Screen—For controlling strong glare and brightness of sky and water; harshly lit and contrasty subjects; a blue sky can be darkened to about the same extent as with an A filter without changing the color of the foreground; dissolving reflections through glass or water without changing color density; the maximum results are obtained with the sun's rays at 90 degrees angle to the camera; may be used in combination with any filter; two Pola Screens together form a variable neutral filter; the variable range being up to 32% transmission.

New Fairchild Documentary

PRODUCTION of the first documentary motion picture in color on the subject of molded plastic-plywood construction of multi-engined aircraft has just been announced by Joseph E. Lowes, Director of Public Relations for Fairchild Engine and Airplane Corporation.

The Princeton Film Center of Princeton, New Jersey, will produce. Gordon Knox, the Film Center's Executive Director, will supervise.

Aces of the Camera

(Continued from Page 262)

don't all sit down in the two front rows, are as numerous as ever. So action pictures are still being made, and Jim Brown makes his share of them. The glamor and excitement of the old days still exists for him as he follows his action along curving mountain roads, or stands behind his camera facing a cattle stampede. The pictures Jim makes don't win Oscars. But they call for camera skill and "know how," under the most exacting conditions sometimes, that most of the boys on the big lots never have to meet.

Jim started getting his camera "know how" in 1912 with the Edison Company in the Bronx. He was hired for $15.00 per week. And to make the deal more attractive they let him be his own assistant. His first assignment, he remembers, was to shoot up from the floor of a canyon at a car which was to come over the brink and hurtle down the cliff to his feet. He was most anxious to make good, and in his anxiety lost sight of the danger to himself that would result if the car failed to fall as scheduled. For half an hour before the shot was ready he practiced the coordination necessary for him to crank the camera with one hand, while cranking on the tilt-head with the other.

At first he couldn't get it. He had to turn one way with one hand at one speed, and the other way with the other hand at another speed. Like rubbing your stomach and patting the top of your head at the same time. But at last he thought he had it. By concentrating on nothing else he felt sure he could do it. So the car was pushed up to and over the edge of the cliff.

As soon as the car appeared in his finder Jim started cranking away. And as it teetered on the edge he cranked his tilt-head, and, refusing to be distracted by anything, swept his lense down with perfect coordination at precisely the previously determined speed. Only when the camera was pointed at the ground directly in front of him did he stop, and then with the satisfaction of a job well done. But when he looked at the place where the car should have been, it wasn't there. And come to think of it, he had heard no crash. When somebody yelled, "Look out!" he was amazed to see the car hurtling down the cliff towards him. There were only moments to safety. Jimmy grabbed them and jumped. It seems that while Jim was practicing his superb coordination the car was still teetering on the brink.

That was the first of many narrow escapes while officiating at the camera. But he doesn't seem to worry, he firmly believes he leads a charmed life. An incident that happened to him at the tender age of six might have had something to do with that belief.

Jim was playing on the roof of his house with some of the other little boys. They had a rope around the chimney stack, and were pulling themselves up on it. Playing steeplejack, or something. It was a three story house, with a steeply slanted slate roof; which, as any mother knows, is a perfect playground for a six-year-old boy. It was Jimmy's turn and he had pulled himself almost up to the chimney when the bricks gave way. For a horrible moment he slid towards the edge of the roof; and then, followed by a shower of bricks, shot out into thin air. All the other little boys ran home, wondering what they would tell their mothers. But they need not have worried. Jimmy had landed on a clothesline, which had bounced him up and down a couple of times, and then ricocheted him into the safety and security of a pile of manure.

About 1914, when the big industrialists began to compete with one another to see who could produce the best movie, Jim and his brother Russell went into the business of making such pictures. He remembers one they made for the Midvale Steel Co., in Volcan, Mich., when the temperature at the top of the shaft, where they had some shots to take, was 20 degrees below zero. Down in the mine, where some more shots had to be made that day, the temperature was 130 above, with fearful humidity. He had to stop every minute or so to wipe the sweat from the camera. Looking back at the camera equipment that was available, and the film stocks then in use, to say nothing of the portable lighting one could get down a mine in those days, a successful production like that has all the earmarks of a miracle.

In 1916 Jim and Russell Brown invented, and went into the manufacture of the Russell Camera. Its salient characteristic was that it had a magazine on either side of the lense, a design that formed a natural matt box out of the camera case and did away with the necessity of a protruding mattbox. It was very light, the case being fabricated of bakelite, and was most remarkable because of the complete silence of its movement. In fact the movement was so silent that Roy Vaughn, who was using it to shoot a scene with Johnnie Hinds, says the comedian thought it was a gag when he didn't hear the familiar camera noise, and refused to believe that the camera had a movement at all until they proved it to him.

A deal was all set with a big firm of instrument makers to manufacture the camera when World War I broke out. The contracting firm had to back out because of government war commitments. So the new Russell Camera patents were merged with the equally new Mitchell Camera patents, and when that deal was consummated Jim joined up.

(Continued on Page 280)

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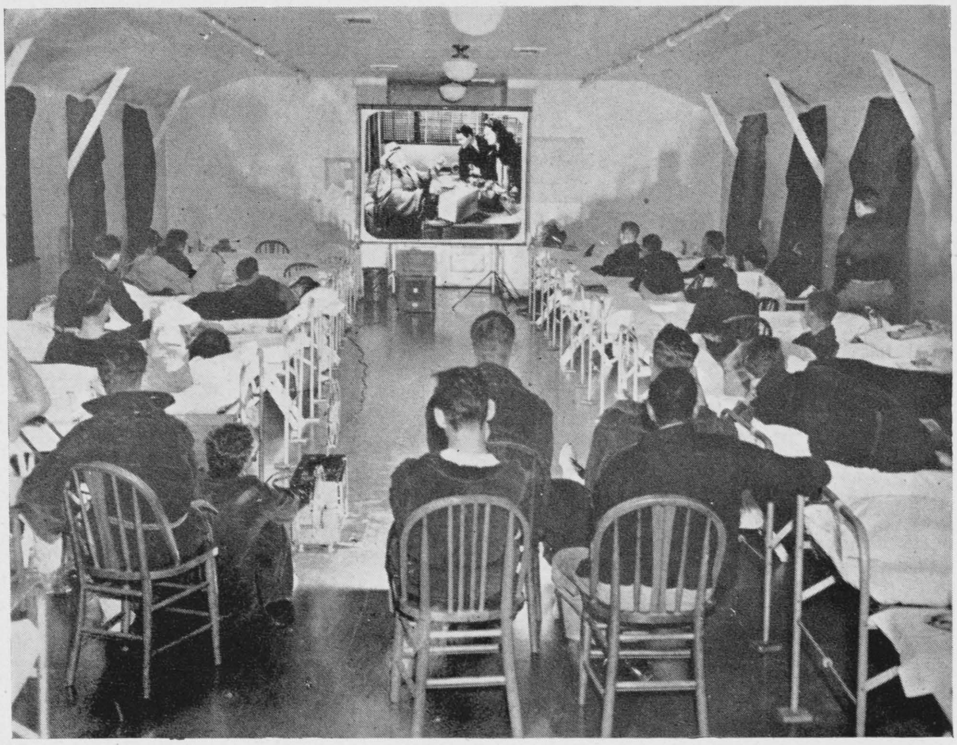

MANY wounded soldiers have been sent back from the battlefronts of the world to military hospitals in the States. Some of them are interned for weeks, some for months, or indefinitely, but the community life that develops in these hospitals has produced renewed evidence of American ingenuity

The boys hold contests, publish newspapers, inaugurate new projects to make the long day of a convalescent more bearable. *Convalescent Capers* is one such periodical published at Lowry Field. *Capers* writes about the highlights of hospital society at the Field; paints a picture of what our wounded servicemen opine. The above picture is excerpted from a recent issue which illustrated Bell & Howell Filmosounds projecting movies in the wards. The boys receive these films gratefully—give a vote of thanks to the machines that make this recreation possible.

Aces of the Camera

(Continued from Page 279)

He started out as a private driving a truck, and ended up as a captain with his own film unit. Capt. Jim Brown, of the famous Rainbow Division, piled up an enviable record as a soldier. He served eleven months at the front, and with his other decorations, is entitled to wear the ribbons of almost every famous American engagement.

Three cameras were blown out of his hands during those eleven eventful months. On one of these occasions he was unhurt after having been blown twenty feet by an exploding shell. No wonder he feels he lives a charmed life.

From all accounts, Jim was a lot more successful getting the action stuff in France rather than the personalities. On the way over, on the Amerika, in the first All-American convoy, he took with him the first Akeley to go to France. A camera that Carl Akeley had been reluctant to let him have because he was not satisfied that it was in perfect order. But in the tests he made on the board it worked perfectly. Perfectly until he went to get some shots of his chief, General Russell of the Signal Corps, who was on board. Then it began perforating. Six times Jim tried to get a shot of his general, working meanwhile on the innards of the camera like a man possessed. But each time it was aimed at the general it perforated. It became quite a joke between them.

On another occasion General Pershing paid a surprise visit to review some troops up near the front lines, while the Huns were dropping shells in the vicinity. It was a unique opportunity, and Jim quickly set up for the shot while the good general prepared to face the camera from his most photogenic angle. But no sooner had Jim started to grind away than he heard the end of the film go through. It seems that the assistant he had still found the whizzing of German shells a disconcerting novelty and had forgotten to reload. But feeling that it was no time to explain matters, Jim just kept grinding away while the general smiled, shook hands with the commanding officer, got into his car and drove away. For weeks after Jimmy heard that General Pershing was wanting to know what had happened to the film that was shot that day. If the general should hear of this now we sincerely hope he won't be too hard on Jimmy or his assistant.

He lost a lot of cameras, but he made a lot of friends while he was in France. His first meeting with Ira Morgan, A.S.C., was in the front lines at St. Mihiel. And his friendship with the late Larry Darmour, at whose studio he still holds forth, and for whom he went to work in 1926, was begun on the battlefield. Even the girl who was to become Mrs. Jim Brown, a Pasadena girl serving in France for the Red Cross, he met during the fortunes of war. As a matter of fact, it was to meet her family that he made his first trip, after the war, to California.

In the silent days Jim filmed the Karl Dane and George K. Arthur comedies, the Barney Google series, the Louise Fazenda series, and the comedies featuring Toots and Casper, Alberta Vaughn and Al Cook, the Three Fat Men, in addition to the series that gave Mickey Rooney his debut as Mickey McGuire.

When sound first came in Jim saved his studio a lot of money by putting Fearless movements into their Bell and Howells and hanging a motor, in a cork and sponge rubber bag, from the tripod. The drive was accomplished by a flexible shaft.

In recent years his talents have been used on the "Crime Doctor," "Whistler," and "Ellery Queen" series. Currently he is working on his fifteenth serial. Serials always provide the most in thrills for the cameraman as well as the audience. But they're not all in the script. Jim has been caught on top of a blazing building, been dragged by a speeding locomotive, and had almost every known type of wheeled vehicle turn over too close to him for comfort. But, it's all in a day's work, he says.

No wonder he took up smoking!

Bell & Howell Announces New Lens Cleaning Fluid

OPTI-KLEEN, the new lens cleaning fluid recently launched by Bell & Howell Company, is said to be the answer to the problem of *efficiently* cleaning surface-coated glass. A reflection-reducing process, surface-coating was introduced as a wartime necessity, and will be a peacetime "must."

The appreciable superiority of surface-coated lenses is matched by Optikleen, especially designed to keep pace with this lens improvement. Reflection-reducing coatings may be severely damaged by the use of a cleaning material containing wax, so Bell & Howell laboratories brought forth this doubly-effective solution for any lens or finder cleaning, acclaimed superior due to the absence of *all* solids, which eliminates the possibility of residue from the cleaning fluid being left on the surface of the glass.

Review of an Industrial Motion Picture

Title: "YOU ARE SPERRY."
Sponsor: Sperry Gyroscope Company, Inc., Great Neck, Long Island, N. Y.
Type: Induction or employee orientation.
Length: 1000 ft., 16mm sound, black and white, reduction print from 35mm original.
Producer: Audio Productions, Inc.
Narrator: not shown.
Continuity: well handled.
Technique: excellent.
Sound quality: good.
Availability: address inquiry to sponsor.

Content Comment

This Sperry film is well conceived and expertly executed. It was apparently designed for use in an "induction" program to acquaint new workers with the extent of the Sperry operations, and to impress the employees with the importance of their individual efforts in the battle of war production.

As indicated by the film's title, "You Are Sperry," the general theme of the production is to emphasize the worker's personal contribution to the combined effort of the company. This theme is cleverly presented in several rapid moving sequences.

The film actually starts, rather abruptly, with a sub-title introducing the President of the company, who talks synchronously to explain that "the motion picture following, reflects the spirit of the Sperry company," etc. His talk stresses the vital part their products play in winning the war, as modern military strategy depends upon machines and instruments, such as those produced by Sperry.

Following his talk, is a good montage or series of short views of the exterior of various company buildings, with an accompanying musical background. Altho this sequence actually reflects the growth and progress of the organization, the narration explains that "buildings of brick and stone and glass, are only symbols or outward manifestations, and the real Sperry is YOU, the factory and office worker." At this point a crowd of workers is shown approaching the camera, as the film title, "You Are Sperry," finally comes on the screen superimposed over the crowd scene.

This variation from the conventional introductory routine usual to such films, is an interesting treatment. The personal approach continues as we are taken past the guards, and into the plant. Various departments are shown, then close-ups of workers, several of which are named as being workers who recognize the vital importance of their jobs. As they assemble various instruments, scenes dissolve in to show planes and ships where the instruments are used.

Later, another executive talks, followed by plant scenes to emphasize the cooperation, and coordination of all departments. An animation sequence shows the location of the various Sperry plants, and also illustrates how suppliers in key centers send a continuous flow of parts and raw stock. Other well handled scenes cover the historical background of the company, continuous research and development of new products, employee activities, safety regulations, etc.

Emphasis throughout the film is on the vital part Sperry instruments play in the war effort, building up the patriotism displayed by the workers who realize their united effort will help to win the war. Individual workers are named as they are shown, in several scenes.

The closing sequence dramatically shows troops marching towards the camera, as a chorus is heard singing the Star Spangled Banner. The chorus continues faintly in the background, as the narrator reads a poetic title on the screen —"If our lines should form and break, because of things you failed to make," etc.

The entire films runs smoothly, and is expertly produced. It should seriously impress the war worker with the importance of his or her job.—**Ed Pyle.**

NOTE: We will be pleased to have Mr. Pyle review industrial films each month in the Cinematographer. We do ask the sponsor of each film sent for review to enclose the following data: Purpose for which the film is intended; producer; narrator, or; indicate if filmed on 35mm then reduced, or on 16mm negative and positive print, or 16mm reversal with contact print, or 16mm print from negative made from reversal original, etc.; sound recording—direct 16mm or 35mm optically reduced to 16mm, or 35mm rerecorded to 16mm; availability or restrictions, on loan or rental.—The Editor.

A Big Job

Aerial photography is reported to be providing 90 per cent of military intelligence to the U. S. Army and Navy in the present war.

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Film Production In Argentina

(Continued from Page 261)

night. Sixty trained technicians work in three shifts to keep up with the process-demands. A special night shift develops studio negative and turns out "rush" prints, so producers may see the result of each day's work before starting a new day. This has saved many thousands of pesos and many headaches for these producers who work on limited capital and short shooting schedules.

To those people not familiar with technical facilities in Argentina let me say that the equipment now used in the laboratories of which I write stacks up with that used in any laboratory anywhere; the same as is used in studio laboratories in the United States. Although the automatic developing machines are made in Argentina, each machine contains many parts purchased in the States. The pumping equipment is the same as that used on most American machinery of the same type. Some of the ten automatic developing machines are used for negative developing exclusively; others for "dupe" negatives; others for release prints, and one for 16mm. reduction prints. The only machine that is not made locally is the DeBrie Automatic Developing Machine, purchased in France before the war. This machine is used exclusively for release prints.

In the printing room we find Bell & Howell Automatic Printers, De Brie automatic printers. Twelve printing machines run day and night.

Walt Disney used the Alex Laboratories to make his Spanish version of "Fantasia" and other Disney features.

Yes, film production down here in the Argentine is dabbling in its own color, too. Alex Color is a color process which has been developed in the Alex Laboratories, and has been highly successful in local films. However, due to the shortage of raw stock and chemicals, the color process has been suspended for the time being.

The shortage of raw stock has forced the studios to reduce production to a minimum. The film situation is so critical that a producer has to think twice before even ordering a rush print of all his takes for the day, knowing he won't have enough positive film on which to make his release prints. It is really a serious situation. Some producers have plenty of negative stock, but hesitate starting a new film until something is done to assure sufficient positive film for the necessary release prints. Generally, the producer needs from twenty to thirty release prints, which from the Hollywood point of view isn't many, but sometimes they can't get enough film for that small number of prints.

To partially relieve the shortage Carlos Connio has started to reclaim old rolls of release prints. He removes the emulsion from the celluloid and applies a new emulsion of his own fabrication. Working with him on creating a new emulsion has been the Argentine Government Explosives Factory. Some of this reclaimed film is good enough to use in making "rush" prints. Even these "rush" prints are then again reclaimed and used for more "rush" prints. This Argentine-made emulsion is good enough for "rush" prints, but it can't be recommended for release prints if the Argentine film producers want to maintain their present standards of quality production.

There are many other film laboratories in Argentina that serve the film industry. They all work on a smaller scale, but strive for quality printing and developing, for there is now no room for a laboratory that cannot deliver quality prints. Yes, film production in the Argentine is decidedly one that now demands quality in every step of film making.

Tropical Problems In Aerial Camera Maintenance

(Continued from Page 263)

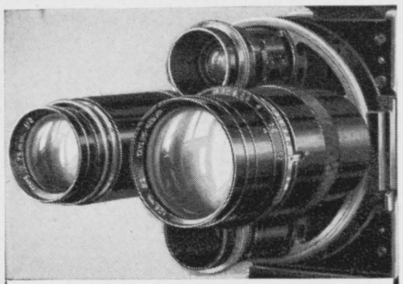
kept as air-tight as possible, with a vent in the roof, and by holding the humidity at less than 40 per cent the corrosion, rust and fungus is cut to a minimum. This procedure is highly recommended for the storage or any optical equipment in the tropics.

On the basis of the field men's reports, base plates and heating surfaces of camera magazines, which used to be bare aluminum and magnesium, are now anodized and dichromated. Steel plates are cadmium plated wherever possible. Only the most critical heat-treated parts are not cadmium plated because of the impossibility of machining them to the proper tolerances when plated. These parts, however, are in the minority, and can be carefully watched for rust formation.

Tested glues are now being used in place of the old animal glues, and heavy felt padding has been eliminated from carrying cases and trunks to prevent retention of moisture and the growth of fungus. Cork linings have been eliminated from heated cameras, and an outer jacket, constructed of fiber glass, which has been tested for its fungus resistance properties, has been substituted.

Experiments are being conducted in the University of Pennsylvania's "jungle laboratory" by Dr. W. G. Hutchinson, and he has submitted a fungicide which Fairchild is giving further tests in the field by incorporating it with glues and lacquers. This fungicide showed "very promising" results after exposing the equipment coated with it in the tropical jungle room.

One of the achievements in the Ford Motor Company's war effort is the Aircraft engine program at the Rouge plant. This division has delivered more than 21,000 Pratt & Whitney twin-row, 2,000-horsepower aircraft engines.



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Radiant Starts Program to Please Returned Vets

UNUSUAL enthusiasm from both service men and industry has greeted the inauguration of a post-war plan for assuring proper placement for men and women after they leave the U. S. Armed forces. Developed by the Radiant Manufacturing Company, makers of Screens for motion picture, slides and film strip projection, this program is now in full swing and is bringing some surprising results. The specific object of the Radiant plan is to obtain the registration of all men and women who are engaged in visual training, film production and film distribution, or who had visual equipment experience in this field after the war can be located.

Special registration cards for this purpose have been prepared by the Radiant Manufacturing Company and distributed at points where all types of training and entertainment films are stored and projected, and where equipment is serviced. These cards list the previous experience and background of each registrant, as well as the specific fields in which post-war interest is indicated.

These fields include the production and distribution of films and the sales, servicing, manufacturing, retail and wholesale distribution of projection equipment. Registration cards are beginning to pour in to Radiant headquarters. When the files are completed, the lists of these registrants will be sent to manufacturers, distributors and retailers in the visual training industry.

"Ravaged Earth" Brings Fame to M. L. Moody

MARK L. MOODY, a businessman in China for 23 years, was "just another amateur photographer" until the sensational scenes of the war in China, taken with his Bell & Howell 16mm. Filmo-70DA, were blown up to 35mm. size and presented at movie theaters throughout the country under the title "Ravaged Earth." One of the most amazing facts of Mr. Moody's story is that his was a strictly amateur undertaking! The authenticity of the film, which comments on the wreck of human life in China, is emphasized by the very lack of slick cinematic technique. Mr. Moody and his Bell & Howell motion picture equipment were constantly subjected to the impact of explosion and the inevitably rugged existence in a bombed and shell-shocked land where slaughter permeated the atmosphere.

A grimmer film than "Ravaged Earth" is not likely to come out of the present war. The film, which was released some months ago, still is being shown in neighborhood moviehouses in many cities. Mr. Moody is at present in the United States . . . and he still uses the *same* B & H Filmo with which he recorded the scenes for "Ravaged Earth."

FILTER COMPARISON TABLE

Showing Effect of Filters with Daylight Exposure on Various Colors Using Panchromatic Film

FILTER USED	COLOR PHOTOGRAPHED			
	YELLOW	RED	GREEN	BLUE
K 1	No Change	No Change	No Change	No Change
K 2	Very Slightly Lighter	Very Slightly Lighter	Very Slightly Lighter	Very Slightly Darker
K 3	Slightly Lighter	Slightly Lighter	Slightly Lighter	Slightly Darker
Aero 1	Slightly Lighter	Slightly Lighter	Slightly Lighter	Slightly Darker
Aero 2	Lighter	Lighter	Lighter	Much Darker
G	Very Light	Light	Lighter	Very Much Darker
21	Very Light	Very Light	Very Slightly Darker	Very Dark
23 A	Much Lighter	Very Light	Much Darker	Very Dark
25 A	Very Light	White	Very Dark	Very,.Very Dark
29 F	Very, Very Light	White	Black	Black
70	White	White	Black	Black
88	White	White	Black	Black
3 N 5	Slightly Lighter	Slightly Darker	Slightly Lighter	Slightly Darker
5 N 5	Slightly Lighter	Slightly Darker	Slightly Lighter	Much Darker
X 1	Slightly Lighter	Dark	Much Lighter	Darker
X 2	Slightly Lighter	Dark	Very Much Lighter	Darker
56 B	Much Lighter	Very Dark	White	Very Dark
58	Much Lighter	Very Dark	White	Very Dark
Neutral Density	No Color Change	No Color Change	No Color Change	No Color Change

This chart is intended to serve only as a general guide. Unusual conditions—range of shades of the various colors photographed, together with the variation of the color sensitivity of the different films used, prevents this chart from being accurate.

Above is a reproduction of a filter comparison table from the American Cinematographer Hand Book and Reference Guide. This book, written and compiled by Jackson J. Rose, A.S.C., is jammed with information for professional and amateur cameramen. From time to time we will print charts and other information from it. The Hand Book may be purchased through the American Cinegatographer business office.

Business Film Library at N. Y. City College

FORMATION of a Visual Aids Division at the Evening Session of the City College School of Business and Civic Administration, New York City, which will make available a unique library of business films to students, business firms and other organizations, was announced today by Dr. Robert A. Love, director of the session. Operation of the Division will begin in September.

Believed to be the first Library of business films in the nation, it will be used to acquaint commercial and industrial personnel, veterans, and other groups with the newest technique of salesmanship, marketing, retailing, business management and other operations. Films will be prepared by the School of Business on numerous phases of business and will also be gathered from business firms and other agencies.

"This library," Dr. Love declared, "is being sponsored not only as a service to business students in one of the largest schools of its kind in the world, but also to serve other schools, institutions and business organizations who wish to avail themselves of this unique collection. The vast amount of research which has often gone into the building of business films will thus become a useful tool in helping retrain veterans as well as others."

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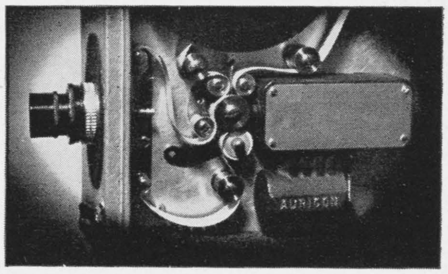

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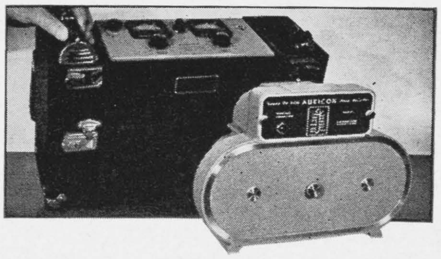

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AC-8

W. C. DeVry and Col. Keating

GUESTS at a cocktail party recently, W. C. DeVry, president, DeVry Corporation, Chicago, and Colonel Geoffrey Keating, of the British film unit, took occasion to compare notes on wartime experience with motion picture cameras of American make, and DeVry's plans for its postwar models.

Colonel Keating is in the United States to work with the U. S. Army Signal Corps on incoming material from current campaigns. This material, as it comes through from the front lines, will be cut and edited here, and released both in the United States and Great Britain. Colonel Keating was associated with Colonel David MacDonald in the shooting of DESERT VICTORY, and with Colonel Hugh Stewart when he made TUNISIAN VICTORY, the successor to DESERT VICTORY.

Approximately 50 per cent of the employes of the Highland Park and Lincoln plants of the Ford Motor Company are working on bomber parts for B-24 Liberators now being assembled at Willow Run. The remaining employes work on other war products such as the 500-horsepower V-8 engine and the Pratt & Whitney aircraft engine.

Kodachrome and Exposure Meters

(Continued from Page 265)

upon the subject to be photographed. This will enable him to determine the proper filter to use for holding back undesirable color-influence that might be displeasing to the eye.

If use is made of an exposure meter to determine exposure, strict calculations should be made, and manufacturer's instructions should be closely followed. If use of the reflecting type of meter is favored (and there are several makes that are very efficient and correct in registering the reflective light-density of the subject) then every density of light, from high to low, falling upon the subject will have to be considered and an exposure calculation arrived at that will give the best result within the registering "latitude" limit of the Kodachrome film in use. The most efficient latitude of Kodachrome film is within two full F. stops. One must bear in mind that all colors do not reflect the same quantity of light equally. Bright colors do not absorb as much of the white light as do dark colors, hence, bright colors reflect more active light than the darker colors.

The experience of the writer has proven that the "Incident" light reading will render the more correct result in the final analysis for exposure and the safest results in meeting with the latitude of sensitivity of the Kodachrome film. The "Incident" light meter measures the light that FALLS on the subject, or the light that lights it up. In computing exposure via "Incident" light reading it will be found that the same amount of light ILLUMINATES ALL COLOR EQUALLY, whether it be shadow-light, sunlight, or artificial light, and an exposure carefully calculated by this method will be as nearly correct as can be estimated.

Problems confronting the color-photographer using the medium of artificial light for illumination will have the advantage of light being under his direct control. He is able to place the light he desires where he wants it, and to build up or lessen the density, or change color, as he desires for his final result. Exposure via the reflective, or incident method, can be calculated with equal ease and certainty.

The old habit of "flat-lighting" subjects is all right for the beginner during his experimental stages of color photography practice, but he should soon discover the displeasing effect of this "flatness" if he is thorough in his study-analysis of color reproductions created by the best known artists as reproduced in magazines and other works of recognized art. He will be made conscious of a desire to create his own standard of "rounded-out color and depth" as his desire for better values increase. He will find that "There is no substitute for thinking."

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Television Needs Ace Cinematographers

(Continued from Page 266)

ture wars, which God grant there won't—the people on the home fronts will see the fighting on the fighting fronts.

"It all sounds fantastic, but it is coming. BUT—inasmuch as everything that goes over the air in television must be photographed, the key men will have to be the cinematographers, just as they are the most important factors in the making of motion pictures. Those cinematographers will have to be our Camera Aces of the Screen."

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Mr. Kippen was born in Sevastopol in the Crimea, but came to America as a lad of 12. He has been on the stage for thirty years, many of them as an outstanding Broadway player. For years he watched his fellow players leave Broadway and go out to Hollywood and films. But he was one of the "die-hards" who couldn't be persuaded to leave the stage for the flickers.

Several years ago, however, he went to Hollywood on a visit. That did the trick. Director George Cukor, with whom he had worked on the stage in New York, cast Kippen in "Keeper of the Flame." He followed that with a role in "A Woman's Face," and then he was in films for good. He did not attract much attention until he played Stalin in "Mission to Moscow." From that he went right into the role of the father of the first miracle child in "The Song of Bernadette." He has just completed a role in "Roughly Speaking"—incidentally, so has his wife, Jeanne Wardley—and is here to stay, at least until television gets going again. He is a great admirer of Hollywood's cinematographers.

"One of the things about the Hollywood cinematographers that impresses me," explains Kippen, "is the painstaking way they light and photograph us character players. Before I came to Hollywood I thought only the glamour stars received much photographic attention. I know better now, for Hollywood's cameramen are proud of their art, and want EVERY shot to be photographically perfect. By golly, they make them perfect, too."

Additional Duties for Terrill

C. L. TERRILL, vice president of the Fairchild Camera & Instrument Corporation, New York, has been given the additional duties of secretary of the company by the board of directors. The former secretary, James S. Ogsbury, Jr., is now in the Army.

Mr. Terrill joined the Fairchild company in 1934 to organize and direct the patent department. Before that he had engaged in patent research, had been a U. S. Army air corps officer, and flying instructor to the Canton government of China.

Lack Elected Director

AT the 20th annual meeting of the Radio Manufacturers Association held in Chicago on June 6th and 7th, Frederick R. Lack, vice president and manager of the Radio Division of the Western Electric Company, was elected a director for a term of two years. Mr. Lack recently served as director of the Army-Navy Electronics Production Agency in Washington.

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New Sales Set-Up For National Carbon

A NEW sales set-up under which all company products will be handled nationally from seven divisional offices is being installed by National Carbon Company, Inc., it is announced. Four of the new offices are in operation and the others will be added by October 1.

All sales activities in the Southeast have been consolidated under a new Atlanta Division office. This division will comprise, in addition to Georgia, the states of Virginia, North and South Carolina, Alabama, most of Tennessee, and Florida. J. F. Warnell, former manager under the "district" system and recently stationed at New York, has returned to Atlanta as division manager. The organization is using the former district address—41 Marietta Street, Atlanta, 3.

C. C. Joslyn is manager of the new Dallas, Texas Division. The former district offices at 200 South Ervay Street, Zone 1, have been retained. This division will comprise, in addition to Texas, the states of Arkansas, Oklahoma, New Mexico, Mississippi, Louisiana, and part of Tennessee.

At Kansas City, A. C. Bryan has taken over as Division Manager. The new offices, which occupy the same location, 19th and Campbell Streets, Kansas City, 8. The division will comprise, in addition to Missouri, the states of Kansas, South Dakota, Wyoming, Nebraska, Colorado, Western Illinois, and most of Iowa. Orders from electrode and anode customers in the Kansas City Division will be received at the Dallas office.

On the West Coast, R. P. Tolles, manager of the former Pacific Coast Division, succeeds to the direction of the new San Francisco organization. The Assistant Managers are A. R. Miller, former district manager at Portland, Oregon and O. B. Rendahl. The new division staff will occupy the old address at 114 Sansome Street, San Francisco, 4, and from this headquarters will be directed sales in California, Washington, Oregon, Western Montana, Idaho, Utah, Arizona, and Nevada.

The three division offices yet to be opened will be located at Chicago, Pittsburgh and New York.

New Filmosound Releases From Bell & Howell

IT AIN'T HAY (Universal). No. 2530, 8 reels. Sparkling comedy centered on a horse that has seen better days, with side-splitting slapstick interludes by screen and radio's funniest team—Abbott and Costello. Available from September 19 for approved non-theatrical audiences.

PRISONER OF ZENDA. No. 5789, 10 reels. Graustarkian romance in the grandest manner. Ronald Colman, Madeleine Carroll, Douglas Fairbanks, Jr., Raymond Massey, Mary Astor. Selznick release.

HE'S MY GUY (Universal). No. 2531, 6 reels. Human relations comedy-drama involving the staging of morale-building shows in defense plants. Timely, interesting, diverting. Joan Davis, Dick Foran, Irene Hervey, Gertrude Niesen, Mills Bros. Available from September 26 for approved non-theatrical audiences.

HOME VEGETABLE GARDEN. No. 618, black-and-white. Twenty minutes of authoritative, detailed information on victory gardening, by James H. Burdette, head of the National Garden Bureau and garden editor of the Chicago "Sun." Contains special advice to late season gardening. A sequel to GARDEN FOR VICTORY.

Above: a scene from the new Bell & Howell Filmosound feature release, "'He's My Guy", available from Sept. 26th.

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WESTINGHOUSE SYNCHRONOUS MOTORS, 3600 RPM, 220 V three phase, cost new $105.00, good condition, $57.50; Bell-Howell 220V three phase camera motor, $125.00; Berndt-Maurer 16mm Recording System, $1,995.00; 32V DC generator unit, 750W, automobile type, $29.50; Sunspots, 5000 watt on casters, $165.00; Optical Reduction Printer, Sound, $395.00; Picture, $625.00. Send for listings. S.O.S. CINEMA SUPPLY CORPORATION, New York 18.

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NEW American Cinematographer Handbook & Reference Guide $4.00. AKELEY-BELL 35mm. Single System Sound camera with RCA Galvanometer, 2000-ft. magazine, Akeley Gyro tripod, Cases, Batteries. 2 Akeley Pancake cameras, lenses, magazines, motor, many attachments; De Brie model "L" camera outfit with nest tachometer; 1000 ft. Mitchell Bipack double throated magazines; T. H. Cooke 5¼" F2. Series O lens in bbl. Western Electric 35mm double System Silent and Sound Editor, complete. 35mm. single and double sprocket measuring machines; 200 and 400 foot Bell & Howell Magazines; Single and Double arm Sunshades; Mitchell Double arm effects Glasses and revolving carrier; De Vry cameras; Neumann-Sinclair 400-foot camera; microphones; New Berndt-Maurer 16mm. Sound Recorder; 2" and 3" square glass and gelatin filters; Holmes 750 watt sound propectors; Bell & Howell, Ampro, De Vry 16mm. Sound Projectors; pan and tilt tripods $75.00 up; 1000 and 2000 watt spotlights, Fresnel lenses, no stands, $50.00-70.00 each; spider boxes, cables, etc. CAMERA MART, 70 West 45th Street, New York City.

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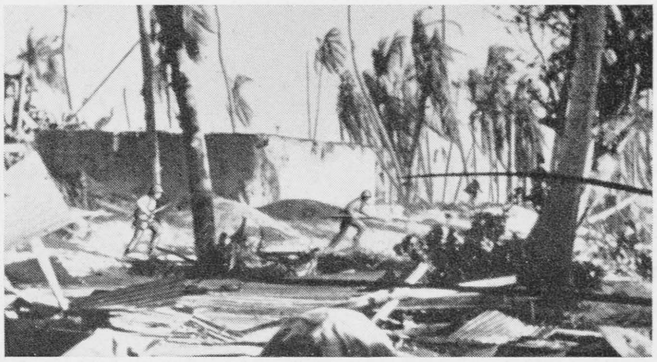

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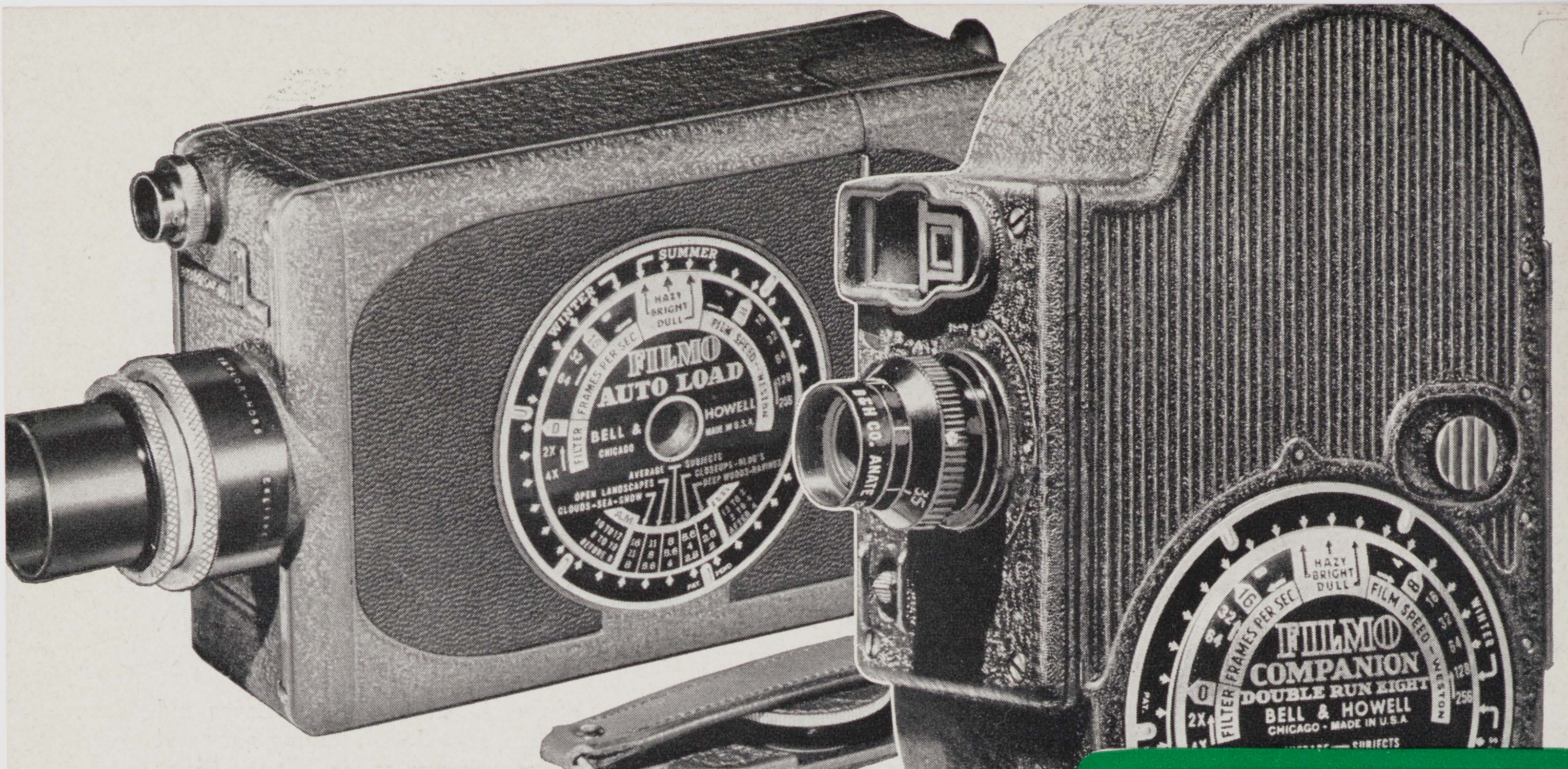

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